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ROYAL COMMISSION

ON

26

PILOTAGE

HEARINGS

HELD AT

MONTREAL, QUEBEC

VOLUME No.:

ENGLISH TEXT

37-40

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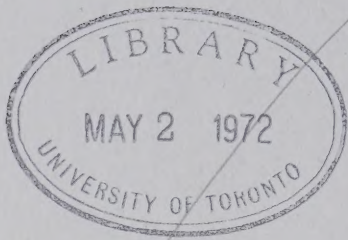
June 26th, 1963

OFFICIAL REPORTERS

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ROYAL COMMISSION ON MARINE PILOTAGE

Proceedings of the hearing
held at the Court House,
Montreal, Quebec, on the
26th day of June, 1963.

COMMISSION:

The Honourable Mr. Justice Bernier	Chairman
Robert K. Smith, Esq., Q.C.	Member
Harold A. Renwick, Esq.	Member

Mr. Gilbert Nadeau	Secretary to the Commission
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COMMISSION COUNSEL:

Mr. Maurice Jacques

Mr. Leopold Langlois, Q.C.	for the Canadian Merchant Service Guild
----------------------------	--

PRESENT:

Mr. J. Brisset)	for the Shipping Feder-
Mr. H. Collet)	ation of Canada
Mr. J.M. Jacques	for the National Harbour Board
Mr. J. Mahoney)	for the Dominion Marine
Mr. C. Mason)	Association
Mr. Marc Lalonde	for the Federation of St. Lawrence River Pilots; Cor- poration of the Lower St. Lawrence Pilots; the Corpor- ation of the Mid-St. Lawren- Pilots; the Corporation of the Montreal Harbour Pilots the Corporation of the St. Lawrence River and Seaway Pilots; the Corporation of the Upper St. Lawrence Pilots



1 ALSO PRESENT:

2

Captain J.S. Scott, Technical Advisor to the
Commission

3

4

Captain F.S. Slocombe, for the Department of
Transport and liaison officer

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1 A/AG/RPS ---ON RESUMING AT 10:00 A.M.

2
3 NOEL PAQUETTE, Recalled

4
5 DIRECT EXAMINATION BY MR. JACQUES (Continued):

6 Q. Mr. Paquette, the last question of
7 yesterday afternoon was about the consultations between your
8 Department and yourself, and pilots or shipowners, about
9 navigational aids in your District?

10 A. Well, we have received recommendations,
11 either by mail by directly by phone or interviews, about
12 improvements that we could bring to navigational aids, and
13 every time we study these recommendations and we follow them
14 inasmuch as we can.

15 Q. Could you indicate to the Commission the
16 nature of such recommendations?

17 A. Well, this covers quite a wide field.
18 You have recommendations about the replacement of non-lighted
19 buoys by lighted buoys, new buoys in new locations, reinforcing
20 of certain lights, the method of taking buoys away, or
21 saying that such buoys should stay there until the last
22 minute.

23 Q. Where do they come from, these recommendations?

24 A. These recommendations generally came from
25 pilots, but as I say I couldn't tell you exactly if it was
26 coming from an official association or body, or from such
27 a group of pilots. Certain recommendations also came from
28 owners of small ships on the St. Lawrence. There are some
29 other recommendations which came through the headquarters of
30 the Department of Transport in Ottawa, which I think were



1 coming from the Dominion Marine Association.

2 Q. Now, when you receive recommendations
3 from groups like this, do you inform the representatives
4 of the shipbuilders and shipowners, in order to get their
5 point of view?

6 A. Well, not generally, because I think that
7 most of the time as we are talking about buoys, changing
8 non-luminous buoys and putting luminous buoys, I don't
9 think that is much of their concern.

10 Q. Periodically is the position of buoys
11 verified by your Department?

12 A. Well, we normally have two ships on the
13 St. Lawrence, and one on Lake St. Louis, patrolling
14 habitually. Normally they are on the section of the St.
15 Lawrence which is under our jurisdiction, and every time
16 they go by a buoy they have to verify the location, and
17 they do so.

18 Q. How do you determine where such a buoy
19 must be located?

20 A. In our District we proceed in the following
21 manner. We work very closely with the Maritime St. Lawrence
22 Seaway, and they have very elaborate maps which indicate
23 the position of each buoy, and at springtime the buoys are
24 located there. They are placed there with the help of
25 engineers which are lent to us by the Seaway Authority.

26 Q. In your District do you know if there are
27 navigational aids which are there in order to make it possible
28 for your ships to determine the position of the buoys which
29 they will place?

30 A. Well, as I told you, for the exact location



1 of the buoys this work is done by the engineers of the St.
2 Lawrence Maritime Service.

3 Q. Not by your service?

4 A. Our service does it for verification, let
5 us say. It is not an exact verification of the location,
6 but every time that a buoy has to be located somewhere, you
7 know, indicating the corner of a curve, which might be
8 dangerous, or if there is any kind of doubt, we ask the
9 engineers from the Maritime Service to help us.

10 Q. Do you know those?

11 A. Well, I know a great number of those.

12 Q. Are those fixed buoys which are there 12
13 months a year?

14 A. Yes, they have been calculated, they have
15 been established. Certain ranges, certain lighthouses, and
16 those are marks which we use to determine the location of
17 buoys which we are going to install.

18 Q. Now, the special range lights which you
19 indicate, do they appear on the maps?

20 A. Most of the time I think.

21 Q. Another kind of question now. Since you
22 have been in your position did you have cases of obstruction
23 to navigation in your District?

24 A. Well, there are two different sorts of
25 cases of obstruction to navigation. There is the case where
26 dredging is being done in order to widen, or make the channel
27 deeper, and those dredgers are under the supervision of the
28 St. Lawrence Seaway Authority, and in my opinion there also
29 have been two major cases of obstruction to navigation. One
30 is the "Federal Express", which sank in the harbour of Montreal.



1 and the other one is a tug which sank in Lake St. Louis a
2 few years ago.

3 Q. In the case of the "Federal Express" which
4 sank in the harbour of Montreal, did this vessel in some
5 way or other prevent normal circulation on the St. Lawrence?

6 A. Well, I think that the "Federal Express"
7 sank in the evening. I don't remember exactly the time.
8 I was advised of it about midnight, and navigation in the
9 harbour of Montreal was entirely stopped until about ten
10 thirty the next morning I think.

11 Q. And the other case which you mentioned?

12 A. It was the "Lynn B", which sank in Lake
13 St. Louis, and it never stopped navigation, never prevented
14 navigation. The only thing which happened was until such
15 time as it was towed away the channel just was a little,
16 was not as wide this time. There was some construction work
17 going on which was stopped.

18 Q. Could you tell us if you have had nav-
19 igational aids which have been damaged by ships?

20 A. It happens in our District.

21 Q. It happens?

22 A. Yes, quite often. If we take 1962, there
23 has been 46 buoys which have been -- I am sorry. There has
24 been 44 buoys which have been hit by ships. Now, we don't
25 know which ship hit them. A certain number of these buoys we
26 are almost certain it is a barge which was being towed there,
27 and they displaced the buoys. They hit the buoys, but there
28 have also been certain cases which we have been able to
29 establish. There has been a buoy hit by the "Crystal
30 Sapphire".



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Paquette, dir. ex.
(Jacques)

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1 Q. What kind of ship is that?

2 A. That is cargo.

3 Q. What is the flag of the ship, which
4 country?

5 A. I don't remember.

6 Q. Is it a large vessel?

7 A. Yes, rather large. It is not, you know,
8 one of the very, very large vessels, but I think it is quite
9 an important tonnage.

10 Q. Is it a seagoing vessel, or is it just a
11 Great Laker vessel?

12 A. I think it is a seagoing vessel, but I
13 couldn't affirm that.

14 Q. Now, you said you suspected that certain
15 buoys have been damaged by barges which are being towed
16 around there. Why do you say that?

17 A. Well, there is a certain number of buoys
18 which have been damaged which were in places where dredging
19 was being done, or in place where there is quite a normal
20 traffic of barges. Sometimes we are going to find pieces of
21 wood, which is still on the buoy, and so we have a good
22 presumption that this is coming from a barge.

23 Q. Now, except for this incident, have you been
24 able to decide, to determine one position, one place, where
25 buoys were damaged more often than in other places?

26 A. Well, except for those places where barges
27 go by, no. It might happen. Yes, there has been a period of
28 time when it was more frequent in the harbour of Montreal.

29 Q. According to your knowledge, have there been
30 any accidents in your District which might have been caused



1 by navigational aids which would not have been in the right
2 location?

3 A. Not to my knowledge.

4

5 CROSS-EXAMINATION BY MR. LALONDE:

6 Q. Mr. Paquette, have you been Regional Agent
7 in another District than Sorel?

8 A. No.

9 Q. When do you start taking away the buoys
10 in your District?

11 A. Normally this takes place at the end of
12 November, the last weeks of November. Sometimes it goes as
13 far as the beginning of December. I am talking about the
14 main channel.

15 Now, as for the northern channel, from Repentigny
16 to Lanoraie, this usually takes place in the third week
17 of November.

18 Q. At what period can we say that all navigat-
19 ional aids are put back in position at spring?

20 A. Well, this depends on the ice. This may
21 start as early as April the 7th. Usually between the 7th and
22 the 15th of April.

23 Q. How long does it take you once you start?

24 A. Well, one week for lighted buoys, and another
25 week to install the other buoys, so let us say about two
26 weeks.

27 Q. That would mean that around the end of the
28 third week of April we could hope that all navigational aids
29 are in operation?

30 A. Well, the third week. It all depends on the



1 conditions of ice. If we start only on the 15th of April
2 it would be at the very end of April.

3 Q. Has it already happened that all navigation-
4 al aids were in operation only at the beginning of May?

5 A. It has happened in the past. It seems
6 right now that due to the change of conditions of the regime
7 of the St. Lawrence that we now can put the navigational
8 aids in operation a little earlier than that, but there can
9 always be a special year.

10 Q. What do you have as navigational aids
11 in service during the winter season?

12 A. During the winter season we have all our
13 main lights which indicate the centre channel of the St.
14 Lawrence River, which are normally operating. Now we have
15 in addition between Port Neuf and Montreal one hundred and
16 seventeen winter buoys, which are installed in the fall.
17 On Lake St. Louis there is no navigation whatsoever in the
18 winter, so there is no question of it.

19 Q. What do you mean when you say that range
20 lights are normally in operation in the winter?

21 A. Well, we do our share to see that they are
22 in operation, but what happens is that, taking into account
23 the fact that night navigation, navigation during the night,
24 is nil during the winter, so if the lights don't work the
25 report might come quite a long time after the breakdown took
26 place. We repair them as soon as we can after we hear about
27 it.

28 Q. How soon do you repair them?

29 A. It depends on the accessibility of the light
30 There are some we can reach only by helicopter during the



1 winter.

2 Q. Are you thinking in terms of hours of
3 weeks?

4 A. No, it is in days. If there is an
5 icebreaker around with a helicopter it is quite easy at that
6 time to have the repair made. But on the other hand, if the
7 icebreaker is working somewhere else, there are some navig-
8 ational aids which we can't reach at that time.

9 Q. Now, these range lights, are they in
10 operation from Port Neuf to Montreal?

11 A. Yes, the entire course under my jurisdiction

12 Q. Do you have some on Lake St. Pierre?

13 A. Yes.

14 Q. Are they in operation during the winter
15 season?

16 A. Well, on Lake St. Pierre there is a special
17 case that you have two range lights, forward range lights,
18 on Lake St. Pierre. The two normal range lights, the
19 summer range lights, are replaced for the winter season
20 because the base is too high above the level of the water,
21 and the permanent structure would be taken away by the ice
22 in the spring, so we replace these structures by large buoys,
23 or by cheaper structures, and of course when the ice melts,
24 well all of this disappears. It is taken away by the ice.

25 Q. Does this take place to your knowledge?

26 A. Yes, almost every spring.

27 Q. What is the width of the channel at this
28 place?

29 A. Five hundred and fifty feet.

30 Q. Did this happen more than once, that those



1 buoys disappeared at spring?

2 A. Almost every spring.

3 Q. How long does it take to go and replace
4 them then?

5 A. Well, to reinstall them we can at certain
6 times replace the buoy on the pillar, on the base, and
7 some other times it is not possible, and in order to replace
8 the permanent structure we have to wait until the level
9 of the water has gone down sufficiently, and it happens that
10 it might take until the month of May and sometimes, accord-
11 ing to the condition of the water, sometimes until the middle
12 of May.

13 Q. The other buoys which you have during
14 the winter season, **are** they frequently displaced?

15 A. Well, in the spring they are quite often
16 displaced, yes. When the ice melts during the thaw and
17 during the winter sometimes it happens that blocks of ice
18 will displace them. Every time that this is possible the
19 icebreakers put them back in position, or replace them if
20 they have disappeared.

21 Q. In the statistics which you have mentioned
22 yesterday, did you include all the cases of displacement
23 of buoys, even those taking place during the winter?

24 A. No.

25 -

26 -

27 -

28 -

29 -

30 -



1 Q. So, if I understand properly, the statis-
2 tics which you have given yesterday apply only to the
3 Summer season?

4 A. Yes, the Summer season, from April 1st.
5 The statistics cover not from April 1st --- let us say from
6 the time the buoys are installed. Let us say April 10th
7 until the Summer or a little later.

8 Q. In other words, the statistics cover only
9 Summer buoys?

10 A. Yes.

11 Q. As you have said, you can start installing
12 them around the 15th of April. This might cover the period
13 from the 15th of February until the third week of November?

14 A. No, this covers longer than that. This
15 can cover as far as the end of the period when the buoys
16 are taken away. That is around December 15th.

17 Q. But you have no statistics of the
18 placement of buoys during the Winter?

19 A. No.

20 Q. Do you still receive reports concerning
21 these displacmments of Winter buoys or range lights?

22 A. Yes. But, as I said before, with the
23 range lights it is quite rare, because most of the time
24 the ice-breakers get those reports concerning the lights,
25 because, after all, the lighthouses all around --- the
26 lights of the lighthouses most of the time are used
27 only in an emergency, while an ice-breaker isn't in a
28 position to go under cover in the night, or at times a
29 vessel may want to reach a certain destination before
30 nightfall.



1 Q Now, do you receive reports about all
2 buoys displaced during the Winter season?

3 A No, not necessarily, because there are
4 certain of these buoys which, at a given time, are ice-
5 covered; consequently, a boat passing nearby could suppose
6 that the buoy is in position, but it isn't necessarily.

7 Q. Does this frequently happen that in
8 your district the buoys may be ice-covered?

9 A. Yes. Naturally, because before the
10 ice-breakers go over while an ice cover is formed. Then
11 there are certain ice movements which may cover entirely
12 a buoy.

13 Q. Do you have an idea if this is frequent
14 or rare?

15 A. Well, frankly I haven't too much
16 experience in that field, in the field of ice-breakers.

17 Q. Now, concerning these buoy displacements,
18 on the basis of the reports that you received and
19 supposing that you are far from receiving all displace-
20 ment reports, do you receive some frequently during the
21 Winter season? That is between December and April 15th?

22 A. Well, during the Winter we receive
23 reports frequently. Well, I wouldn't say too frequently,
24 but there are certainly far more buoys displaced than
25 we receive reports about.

26 Q. So the ice-breakers themselves put them
27 back into position?

28 A. Yes --- usually, because those are the
29 only available vessels in order to replace the buoys at
30 that time.



1 Q. Now, insofar as the reference points are
2 concerned, on the ground, have you brought about the same
3 improvements in your Quebec District; that is to say, if
4 the range lights would be painted a special colour which
5 would give a better reference point or if those range
6 lights may be confused with snow in the Winter?

7 A. Well, we have started along this improve-
8 ment program about four years ago, but we haven't
9 finished our work. We had certain experiments to under-
10 take at the beginning, especially the life-expectancy of
11 the phosphorescent light, but we are convinced that this
12 program may be implemented, but the work is not finished.
13 I think we still have to work on that project for about ---
14 There are still only sixty range lights painted that way.

15 Q. You mentioned that oftentimes buoys
16 were displaced --- or, rather, you talked about obstruc-
17 tions to navigation and you mentioned that the dredges
18 at times were constituting obstructions. Do you think
19 that there is a great deal of dredging done in your
20 district?

21 A. Well, one can say that dredging is being done
22 practically all the time, or permanently.

23 Q. Can you please indicate to us the main
24 sectors where this dredging is done most frequently or
25 tell us if it is done on the whole course?

26 A. One can say that it is done on the whole
27 course, because it is an improvement, a constant improve-
28 ment of the channel; but I believe that in that field the
29 representatives of the Maritime Channel are going to give
30 you more accurate information about that.



1 Q. That is what I was just told. There will
2 be some special witnesses to that effect later on. When
3 some dredging is being done, it may have a certain
4 influence on navigational aids?

5 A. Yes. Oftentimes we are forced to displace
6 navigational aids in order to protect the place where the
7 dredges are at work.

8 Q. I am sorry. I didn't hear the last part
9 of your answer.

10 A. Oftentimes we are forceeed to displace
11 these navigational aids in order to protect the places
12 where the dredges are working.

13 Q Did it so happen or were there any
14 cases in your section, in your district, where dredges
15 have displaced buoys without your being advised of it
16 in advance?

17 A. Well, I have no precise cases about that
18 that I can remember, but I think it happened and in the
19 cases where we knew about it, immediately we advised
20 the contractors to stop this practice and we have estab-
21 lished a certain procedure to that effect.

22 Q. What is the procedure that you have
23 established now?

24 A. Well, in the first place, as these con-
25 tractors work under the supervision of the service of the
26 Maritime Channel and the St. Lawrence, whenever they need
27 a change of buoy in order to accomplish their work, they
28 must apply to that special service, which, in turn, communi-
29 cates with us and we do the change ourselves under the
30



1 supervision or the direction of the engineers of the
2 Maritime Channel and the St. Lawrence and we publish a
3 notice to the navigators to that effect.

4 Q. How many ships do you have at your dis-
5 posal to repair navigational aids that were damaged, and
6 so forth, during the regular navigation season, as well
7 as during the Winter season?

8 A. Well, during the regular season and in
9 normal times, we have three boats or three vessels. I
10 say "normal" --- under normal conditions --- because up
11 till now we have had only two. During the Winter season
12 we have only ice-breakers which may give us a little
13 servicing so long as it doesn't interfere with their own
14 work.

15 Q. That means that during the Winter
16 season the ice-breakers have to open the channel and that
17 is their first task?

18 A. Well, necessarily, because we try to
19 combine both services.

20 Q. In the Spring time you say that you have
21 only two vessels operating at the present time. Was that
22 the same thing at the installation of the buoys --- you
23 had only two vessels at your disposal?

24 A. Well, for the installation of the
25 buoys, normally we have two vessels on the St. Lawrence
26 installing the buoys and one on Lake St. Louis. On the
27 St. Lawrence we have a loan, during the installation of
28 buoys, of one of the vessels of the St. Lawrence.

29 Q. So this gives you three vessels normally?

30 A. Yes.



1 Q. Did you have three vessels operating
2 last year?

3 A. Yes. And the preceding years as well.

4 Q. Do you expect to have three vessels very
5 soon or is there a change in policy?

6 A. Yes. There is a boat which is at the
7 shipyards at the present time which is being built.

8 Q. Good luck to you, then.

9 A. Thank you.

10 Q. Do you think that three boats are enough
11 to meet the needs of your section at the present time?

12 A. In normal conditions, yes.

13 Q. What do you mean by "normal"?

14 A. Well, what happens ---

15 Q. This was exceptional?

16 A. Well, exceptionally speaking, for
17 example, if there was a time when we need outside help
18 or, for example, if one boat broke down...

19 Q. When one of the vessels breaks down, you
20 do not have any replacement vessel?

21 A. Well then, we can always call upon
22 a nearby agency or another service.

23 Q. Don't you have in your section certain
24 range lights which are not in the centre of the channel?

25 A. Yes, there are some at the present
26 time. There are four range lights, I remember -- perhaps
27 even five --- but four for certain which do not mark or
28 indicate the centre of the channel.

29 Q. Is there any particular reason why those
30 range lights have been set in such a position?



1 A. There are two reasons to that effect.

2 In the first place, there was a lack of time and staff in
3 order to undertake the transport, and the second reason
4 has to do with the fact that the austerity program has
5 suddenly cut short our funds to that effect.

6 Q. Are there any particular indications or
7 particular notices to state that the range lights do not
8 indicate the centre of the channel?

9 A. No, because they are indicated as such
10 on all charts --- navigation charts.

11 Q. You say "as such". What do you mean,
12 that they do not indicate the centre of the channel?

13 A. Yes. That is true.

14 Q. What do you have as a weekend service?

15 A. The same service as during the week.

16 Q. That means to say that if there was a
17 report concerning an unlit light or a displaced buoy on
18 a Saturday evening, you give the same service, or your
19 two or three, if you are giving service first and they
20 can replace them on the Sunday?

21 A. Yes, as long as the reports reach us.

22 Q. Do you have any civil servants in
23 service all of the time?

24 A. There is always one responsible staff
25 member, including the agent, who may be reached at all
26 times during the weekend.

27 Q. You mean reached at the office?

28 A. No, not at the office --- at their
29 homes, or they can be reached anywhere --- either one or
30 the other.



1 Q Let us say that a captain wants to
2 report a light that has gone out and he doesn't know where
3 your home is; is there a different service available?

4 A. All the reports concerning break-downs
5 in navigational aids are submitted to Sorel, through the
6 signalling service; so the staff members in service have
7 our home phone numbers as well as our office phone numbers
8 for the different names of the persons who may be reached.
9 If one is not at home, for a given reason, then another
10 one may be reached.

11 Q Now, you have talked about damage
12 caused to aids to navigation and especially damage to
13 buoys. Do you know that in accordance with the bylaws
14 or regulations, the pilots are to report any damage
15 caused to navigational aids?

16 A. Yes, I am aware of that.

17 Q. Do you think that the navigation
18 service or the navigational aid service implemented
19 in your section at the present time is sufficient to
20 meet the needs?

21 A. Well, sufficient or adequate. This is
22 always a question of viewpoint, naturally. There is
23 always room for improvement in any given service. That
24 is what I think, anyways.

25 Q. Well, to your knowledge, do you think
26 that the pilots have shown a regular interest towards the
27 improvement of the service of navigational aids in your
28 own district?

29 A. Yes, but I must say that, generally
30



1 speaking, yes, they have definitely shown an interest.

2 Q. Now, I think you talked about 145 lighted
3 buoys in the section between Montreal and Port Neuf

4
5 A. Yes.

6 Q. You said that there were no luminous
7 buoys on Lake St. Louis?

8 A. On Lake St. Louis, in the Maritime
9 Seaway section from Caughwawaga to Beauharnois
10 there are 27 luminous or lighted buoys; but in this
11 section of Lachine, there are eight luminous buoys.

12 Q. Those are buoys in your own section?

13 A. Yes.

14 Q. You have mentioned three hundred and
15 one reports submitted during the 1962 season and,
16 once more, these reports about lights of the regular
17 navigation season. To your knowledge, do you think
18 that the year 1962 is quite a representative year?

19 A. Yes, I think so.

20 Q. So you have an average which is ---

21 A. I think that year is quite representa-
22 tive, as opposed to next year --- this year --- which is
23 not a representative year.

24 Q. What happens this year?

25 A. We have one boat missing. Consequently,
26 we cannot afford to give the same service.

27 Q. You mean that ever since the beginning
28 of the navigation season you could not give the same service?

29 A. No.

30 Q. What does it imply, in practice?



1 A. It implies that there are some delays
2 in the replacement or replacing of buoys which have been
3 displaced, and so forth.

4 Q. You mentioned yesterday that it was a
5 question of hours?

6 A. It was in terms of hours for the buoys
7 to be replaced, yes, normally.

8 Q. Does that mean that the delays may go
9 on until the next day?

10 A. Well, at the time when we just finished
11 installing the buoys in the Montreal Harbour, there was an
12 ice floe that flows from the foot of Ile Rouge and has
13 extinguished and displaced at least ten buoys in the
14 harbour and going down to Contrecoeur and as far
15 as Lake St. and as our vessel
16 was busy placing buoys in another part of the river, it
17 was impossible for us to replace in position these buoys
18 before a few days lapsed.

19 Q. How long did it take between --- or
20 rather the number of days that lapsed between that day
21 you received the report and the day you replaced the last
22 buoy?

23 A. Well, it took about a week --- at least
24 a week.

25 Q. Did you have many buoys that had been
26 displaced?

27 A. Yes. There were many that had been dis-
28 placed.

29 Q. In the final analysis, during that whole
30 period you could not sort of direct your course relying



1 exclusively upon the buoys?

2 A. Well, the lighthouses were in operation,
3 but you couldn't rely upon the buoys.

4 MR. LALONDE: Thank you, Mr. Laquette.

5
6 CROSS-EXAMINATION BY MR. LANGLOIS:

7
8 Q. Mr. Laquette, a few moments ago you
9 mentioned the Federal Express which sunk in Montreal
10 Harbour a few years ago. You have stated, if I remember
11 correctly, that navigation in this spot over the Montreal
12 Harbour stopped for practically the whole day; is that true?

13 A. Well, a little bit more than half a day.
14 Navigation was stopped during the evening until about ten
15 o'clock the next morning.

16 Q. Now, after this interruption in the
17 navigation, was there not a complete season where the
18 marine traffic was hampered by works in order to resurface
19 the Federal Express?

20 A. Yes, because the Federal Express had
21 sunk in the centre of the channel, so naturally you had
22 to do some submarine works in order to salvage the ship.

23 Q. Now, if the same accident had happened
24 in a narrow channel, don't you think that navigation would
25 have been interrupted completely for a long period of
26 time?

27 A. Well, perhaps we would have had to find
28 out exactly where the boat would have sunk.

29 Q. I am going to ask you the question
30 another way: If at this level of high tonnage the ship



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Laquette, cr.ex.
(Langlois)

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1 had sunk transversely in the
2 channels, don't you think navigation would be interrupted
3 for months on end?

4 A. Yes, probably.

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(Through the interpreter.)

2 Q. Now, Mr. Paquette, are there not any other
3 places where the channel is so narrow in your District where
4 you would get exactly the same results if a large ship sunk
5 in one of these channels?

6 A. Well, any lake ship of 700 feet which sank
7 in the channel anywhere would certainly cause a disruption
8 of navigation for a certain period of time.

9 Q. Over a long enough period; is that it?

10 A. Yes.

11 Q. Now, you have mentioned special range lights
12 which are in most cases indicated on the chart. Are these
13 special range lights used only for navigation purposes?

14 A. Yes. Well, special range lights, yes.

15 Q. They are used for navigation purposes?

16 A. Well, they are used for navigation purposes.
17 They are used for our purposes.

18 Q. Anyway, there are some reference points
19 for your work?

20 A. Yes. That is why they are not all indicated
21 on the charts, and the reason why they are not indicated on the
22 charts is that the charts are not up to date.

23 Q. Even on an up to date chart, do you think that
24 these navigation points should be indicated?

25 A. Yes.

26 Q. Yesterday we mentioned range lights at
27 Three Rivers, and, if I remember, you stated that emergency
28 lights in that section of the St. Lawrence were less important
29 because of the background of Three Rivers in certain cases?

30 A. Well, not in all cases because of the range



1 lights. The boulevard has no emergency light.

2 Q. Is it your opinion that the urgency of
3 the emergency light is that it could not be distinguished from
4 the city?

5 A. If you have any strong lighting there is
6 no doubt that it would be really very weak.

7 Q. Would it be possible to obtain emergency
8 lights which would have the same intensity as regular lights?

9 A. Well, it certainly would be possible, but
10 this would be quite an expense, which we would not want to
11 make. We would have to invest much more money.

12 Q. Well, would it not be a thing to recommend,
13 especially where there is a danger of emergency lights being
14 confused with lights of the city?

15 A. Yes, I think this could be regularly
16 handled.

17 Q. Is there not also a danger because of the
18 traffic which you find, especially in the traffic of the
19 Three Rivers? Is that not also an additional danger?

20 A. Well, you would have to prove it to me,
21 because I would not agree.

22 Q. Are there not any limits of this District
23 in the southern channel and the northern channel which meet
24 there, so you have ships coming there which are not always
25 parallel going up or going down?

26 A. Yes.

27 Q. Doesn't this same problem arrive over the
28 density of the emergency lights compared with the regular light

29 A. What do you mean exactly?

30 Q. Well, the problem where it is difficult to



1 see range lights from a distance?

2 A. Yes, I have been made aware of this. Now,
3 if this is something which was suggested to me, maybe there
4 could be some improvement, like we did it at Port du Lac.

5 Q. I am not going to ask you if you remember
6 the density of the light, but is it the same density as other
7 range lights?

8 A. Well, let's try to understand each other.
9 When we have range lights which function with power from
10 hydro, we usually have 100 watts and sometimes even 200 watts
11 at 110 volts with a reflector. Now, like we have in the
12 Isle of Soleil or place where electric power is not avail-
13 able, we use the same density, with the current coming from
14 the batteries at six volts with eleven-inch reflector, and
15 there is practically the same intensity in the emergency
16 lights as in the lighthouses where we use 110 volts. Do I
17 understand that no matter the distance between the range
18 lights and user, the intensity is the same?

19 A Yes. Of course, we have adopted a system
20 which could answer in our case which could meet most of the
21 cases, and there has been some kind of centralization, of
22 course.

23 Q. Now, the range lights in your District,
24 are they all kept unwatched?

25 A. No.

26 Q. What is the percentage of range lights which
27 are under surveillance?

28 A. I couldn't answer that precisely, but in
29 our District I would say that about 75 per cent are under
30 surveillance; let's say 60 per cent.



1 Q. And as far as the others are concerned,
2 you must, of course, rely on reports which might be made to
3 you by those using the St. Lawrence?

4 A. Yes. Also our technicians make a regular
5 round of these lights.

6 Q. Is this an inspection or maintenance round?

7 A. It is both an inspection and maintenance
8 round.

9 Q. How many times a year are these lights
10 inspected?

11 A. Well, this is what happens. It is difficult
12 to give an exact number, but take, for instance, St.
13 Island where we have three sets. Let's suppose that one of
14 the lighthouses is reported as being out, the technician on
15 the island has the duty to go and check the other lighthouses.

16 Q. Do I understand that have no regular
17 patrol system?

18 A. We have a patrol which checks all the
19 lighthouses three times a year.

20 Q. At regular intervals, I suppose?

21 A. Yes.

22 Q. I don't know if this has been established
23 as yet, but from which sources do you, generally speaking,
24 obtain information of the functioning or non-functioning of
25 these lights? Does this come from the signal service or
26 other sources?

27 A. Well, it is all the sources put together.
28 Usually when pilots reach their destination they communicate,
29 when they see a lighthouse which is not in order, through their
30 regular station, they report it to the office when they arrive,



1 and then the information is transmitted to us by the signal.

2 Q. Now, in addition to the breakdown in the
3 functioning of the light, there is the question of the dis-
4 placement of buoys. What is the most important factor, the
5 factor which is more important than any other in the displace-
6 ment of buoys? Is it the current or ice or anything else?

7 A. Well, in our sector I would say in at least
8 80 per cent of the cases it is due to a collision with a ship
9 or a barge or something or the kind.

10 Q. Even for minor displacements?

11 A. Well, by displacements -- I mean, it can
12 happen that the buoy had not been installed exactly in the
13 right position in the beginning due to an error or something
14 of the kind. Even not making an error, if there is a small
15 difference, the buoy will be left there until we have complete
16 the installation of buoys throughout the channel and we
17 come back afterwards to put it in its exact position.

18 Q. Now, what is the maximum velocity of the
19 current that the buoys can suffer without being displaced?

20 A. Well, we anchor them taking into account
21 the possibility of the current, and we have never calculated
22 what would be the velocity of current that would be necessary
23 to displace a buoy, but we put them in such a position that
24 it would take care of the current at that time.

25 Q. What is the **current**?

26 A. It can come up to six, six and a half.

27 Q. In these places where you have an increase
28 of current do you have difficulty in placing the buoys in
29 position?

30 A. No.



1 Q. Are there also some places where the buoys,
2 because of the current and the tide, disappear at some time?

3 A. Well, you have lighted buoys, cylinder
4 buoys, where they can disappear sometimes with the tide.

5 Q. Now, we have mentioned dredging in your
6 sector. Who is it who takes the initiative to send notices
7 to the seamen as far as reduction in speed is concerned where
8 dredging is being made?

9 A. Myself. It is either myself or it happens
10 that, according to the manner in which the notice is published,
11 that I do it, and it also happens that the Central Maritime
12 Service might do it.

13 Q. Now, to your knowledge, Mr. Paquette,
14 could you tell us if the efficiency of your buoys suffers and
15 diminishes due to the incidence of ice in the spring where
16 you have a lighted buoy which might be reduced because of
17 visibility, for instance?

18 A. Well, in 1962 it happened, as a matter of
19 fact, at the end of October, there was a tempest, a storm,
20 melting snow, and, of course, the snow was sticking on the
21 light itself, and this happened for a couple of days during
22 October. When luminous buoys start to be covered with ice,
23 this is the time we take them away.

24 Q. I was not talking about the buoy being cover-
25 ed with ice, a film of thin ice, of frost?

26 A. Yes, that is something that can happen.

27 Q. Well, don't you find those conditions during
28 the spring and fall, what we call the regular season on the
29 St. Lawrence?

30 A. Yes, that can happen, but it doesn't happen

The first part of the paper is devoted to a discussion of the general principles of the theory of the structure of the atom. It is shown that the structure of the atom is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles. The second part of the paper is devoted to a discussion of the structure of the nucleus. It is shown that the structure of the nucleus is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles.

The third part of the paper is devoted to a discussion of the structure of the molecule. It is shown that the structure of the molecule is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles. The fourth part of the paper is devoted to a discussion of the structure of the crystal. It is shown that the structure of the crystal is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles.

The fifth part of the paper is devoted to a discussion of the structure of the liquid. It is shown that the structure of the liquid is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles. The sixth part of the paper is devoted to a discussion of the structure of the gas. It is shown that the structure of the gas is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles.

The seventh part of the paper is devoted to a discussion of the structure of the plasma. It is shown that the structure of the plasma is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles. The eighth part of the paper is devoted to a discussion of the structure of the solid. It is shown that the structure of the solid is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles.

The ninth part of the paper is devoted to a discussion of the structure of the liquid crystal. It is shown that the structure of the liquid crystal is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles. The tenth part of the paper is devoted to a discussion of the structure of the polymer. It is shown that the structure of the polymer is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles.



1 very often.

2

3 CROSS-EXAMINATION BY MR. MASON: (In English.)

4 Q. From what you have said, Mr. Paquette, one
5 would gather that improvements have been made in navigational
6 aids in your District in the last five to ten years and these
7 improvements are constantly being made. Is that a fair
8 statement?

9 A. Yes.

10 Q. Now, Mr. Paquette, as District Marine Agent,
11 I gather that you would be familiar with the proposed location
12 for a bridge to be constructed over the St. Lawrence River
13 at Three Rivers?

14 A. Yes.

15 Q. Have you been asked in your capacity as
16 District Marine Agent to comment on the suitability of its
17 location from the standpoint of safety of navigation?

18 A. Not at all.

19 MR. MASON: I have no further questions.

20

21 CROSS-EXAMINATION BY MR. BRISSET: (Through the interpreter.)

22 Q. Mr. Paquette, where is your office in
23 Soleil?

24 A. On Prince Street, 15 Prince Street, near
25 the river.

26 Q. Could you give me an idea of the size of
27 your staff?

28 A. We have 24 civil employees. Of those 24,
29 six are directly employed on the maintenance of buoys; the
30 others are office, clerks. We have forty-six in workshops,



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1 including technicians working on repairs of navigational aids
2 and maintenance of navigational aids.

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(Through the interpreter.)

2 A. And we have 68 employees on our ships.

3 Q. Mr. Paquette, you have said in the main
4 questioning that you had in your office a teleprinter
5 communication service?

6 A. No. Not in our office. At the signal
7 service.

8 Q. Is it possible to communicate directly
9 by teleprinter to your office?

10 A. No. One has to call us on the telephone.

11 Q. If a navigational aid is out of
12 operation, has a breakdown, how is it reported to your
13 office normally?

14 A. Well, normally we will be called on the
15 phone, and they will say "well, such a lighthouse had a
16 breakdown. Such buoys aren't lighted", and that is about
17 as much as we have been told.

18 Q. Does this come by telephone from the
19 pilotage office in Quebec or Montreal sometimes?

20 A. Yes, this happens.

21 Q. What is the normal channel of communication?
22 This is what I would like to find out?

23 A. Well, normally, as I tell you, reports are made
24 by teleprinter to the signal office in Sorel, and the person
25 on duty calls the Agency on the phone. This is the normal
26 way. This is the way it usually happens.

27 Now, it also happens that we receive directly
28 in our office telephone calls about buoys or lighthouses which
29 are out of order.

30 Q. And you receive these telephone calls, I



1 suppose, sometimes from pilots individually?

2 A. Yes. It has happened. It happens that
3 it is Mr. Melancon in Montreal who reports it to us, about
4 certain situations, when he has received a report from the
5 pilots.

6 Q. Is there any kind of liaison system
7 between your office and the pilotage offices in Quebec or
8 Montreal, other than by telephone?

9 A. No, not from our office directly. No,
10 it frequently happens that when -- I might get in touch
11 with the signal office in Montreal or Quebec through the
12 Sorel signal office.

13 Q. Do you think it might be advantageous
14 to have better coordination between your office and the
15 offices of the pilotage authorities in Montreal and Quebec?

16 A. Anything which can improve communications
17 between all those concerned will be an improvement.

18 Q. For instance, in the case of dredging you
19 said that there will be a notice to seamen which will be
20 prepared by you. Could you tell us what is the procedure
21 which is followed as far as the distribution of this notice
22 to seamen is concerned?

23 A. Well, the first thing which we do when there
24 is a change of buoys, let us say in a short interval, under
25 short notice, we publish, I mean we advise of this change
26 through radio. Now, after that we publish a notice to seamen,
27 which is sent by mail. Now, such notices and copies of these
28 notices are received by the pilotage offices in Quebec, in
29 Three Rivers. Three Rivers, I will have to check that. I
30 am not sure, but Quebec and Montreal certainly, and they are

THE HISTORY OF THE

REIGN OF KING CHARLES THE FIRST

IN WHICH ARE CONTAINED THE

CAUSES, THE CONDUCT, AND THE

CONSEQUENCES OF THE

WARRE OF CIVILS

IN GREAT BRITAIN

FROM THE YEAR 1629

UNTILL THE DEATH OF

SAYED KING CHARLES

THE FIRST

IN THE YEAR 1649

BY SAMUEL JOHNSON

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1 posted, at least I suppose that they are posted.

2 Q. But you do not get directly in touch
3 with the pilotage offices when you decide that a notice must
4 be published?

5 A. No, because up to the present time at
6 least we have not received any complaints to that effect.
7 We feel that first when we send the information through radio,
8 then it is going to be transmitted through teleprinter, and
9 I think the interested parties are informed in due time.

10 Q. You were here yesterday when Captain
11 Gaudreau was in the box. Do you share his opinion to the
12 effect that there should be periodical meetings between your
13 office and representatives of the pilots, as well as a
14 representative of the shipowners, to discuss the improvements
15 which might be brought to navigational aids in your sector?

16 A. Well, I have expressed quite often the
17 opinion that we should have as much contact as possible on
18 this question. It is in our interest to have navigational
19 aids to be as good as possible, to give the best service as
20 possible, and we are always interested to hear comments from
21 interested parties.

22 Q. On the regional scale you mean, in your
23 sector?

24 A. Yes, because otherwise we might waste quite a
25 lot of time discussing problems which do not concern us
26 directly.

27 Q. You have spoken a while ago about a new
28 ship which is going to be delivered to you today to complete
29 your large fleet of two ships which you have at your disposal
30 right now. I suppose this is a modern vessel, and that it will



1 be more efficient, and ~~that~~ it will accelerate the work of
2 installing buoys when the time comes, and so forth?

3 A. Yes, we hope so. If we do not obtain this
4 result it will be deception for us.

5 Q. You have said Mr. Paquette, that, if I
6 understood properly, since a few years it seems that it is
7 possible to install the base earlier on the river. Would
8 it be true to say that this might be the result of the fact
9 that the channel is open in the winter up to Three
10 Rivers at least, and quite early up to Montreal?

11 A. Yes, I would think so, because it is
12 difficult to determine what the causes are, but it seems that
13 ice being kept away from the ship channel that we can do
14 this a little earlier, but of course it is also true that
15 certain of the advantages also bring some disadvantages.
16 Like something that took place this year, because the level
17 of the water is a little lower than before, and therefore
18 we sometimes have the impression that we have sometimes
19 put the buoys a little too early.

20 Q. In other words, the situation would have
21 been better if the level of the water was higher?

22 A. Well, it would seem so.

23
24 RE-CROSS EXAMINATION BY MR. LALONDE:

25 Q. Referring to Mr. Melancon, who is the
26 local Supervisor of Pilotage in Montreal, are you aware of the
27 fact that some lights might have been --

28 A. We changed another light in Lake St. Pierre
29 near Pointe du Lac. We changed the colour of the light from
30 white to green.



1 Q. What kind of notices were given on this
2 occasion?

3 A. Well, I didn't verify this, but I would
4 think that the normal notice has been sent.

5 Q. If you have this kind of a change which
6 takes place, notice is sent as soon as the light is changed
7 for instance?

8 A. Yes, unless except under extraordinary
9 circumstances we publish the notice even before it takes
10 place, if possible.

11 Q. Has it happened that notices were published
12 only the next day for instance?

13 A. With the written notice this might be
14 possible, but normally every time we change a light, unless
15 there would have been a human error as we say, every time
16 there is a change of a navigational aid we make sure that
17 this would be immediately advised on radio.

18 Q. Since how long have you been publishing
19 this kind of notice on the radio?

20 A. Well, normally according to the importance
21 of the change, or the duration of the change, I think they
22 publish it for one or two days. According to the time it would
23 take for such notice to reach the persons concerned.

24 Q. So this means that if you have a ship coming
25 into the District four or five days after such change, and it
26 was not in the District in the period before those five days,
27 it will not know accept through these notices that such a change
28 took place?

29 A. Yes, this is true.

30 Q. Do you know when the change of light which



1 you mentioned at Pointe du Lac, the smoke of a tug would have
2 been in front of two ships, one going up and one going down,
3 because he was relying on the former situation, and hadn't
4 been made aware of the change in the lights?

5 A. Well, this was not reported to me, or at
6 least that such a ship had touched the bottom, or beached.
7 I was never told that this was the reason.

8 Q. In other words, the only way to know such
9 a change after a few days is to read the written notices?
10 Would you repeat to us to whom you send such notices?

11 A. Well, we have a list.

12 Q. Do you have this list with you?

13 A. Yes.

14 Q. Could you please file it with the
15 Commission?

16 A. Yes.

17 MR. LALONDE: Your honour, would it be possible
18 to have this list produced as an exhibit?

19 THE WITNESS: There are two lists, one concerning
20 navigational aids on the St. Lawrence River, and the other
21 one on Lake St. Louis.

22 THE CHAIRMAN: They will be Exhibit No. 468.

23

24 ---EXHIBIT NO. 468:

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Two documents, two pages each.
The first one Lake St. Louis,
the second one St. Lawrence
River, with the mention that
92 copies on the document which
is called Lake St. Louis, and
86 copies, on the document which
is called St. Lawrence River.

THE CHAIRMAN: And what is it?



1 MR. LALONDE: It is the list of persons and
2 their companies to whom notices coming from the District
3 Marine Agent in Sorel are sent. This is a mailing list.

4 Q. I suppose that anybody who would want to
5 receive these notices has to inform you of that, and he
6 is put on the mailing list?

7 A. Yes, this is true.

8 Q. Could you tell me on the St. Lawrence
9 River how many of the persons on this list are maritime
10 companies, or organizations? Well, if you want, we will go
11 through them one after the other.

12 United Towing Company?

13 A. This is a towing company with headquarters
14 in Sorel.

15 Q. Beaconsfield Steamship?

16 A. I suppose that is one, but I don't know it.
17 I think it is a maritime company for lake vessels, I think.

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(Lalonde)

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1 Q. Signalling Services Maritimes, Mr. M. A.
2 Hamel, Assistant Superintendent for Pilots, Mr. H. Land,
3 Mr. W. J. Manning, Mr. Laing, Mr. Beaudet are all persons
4 who are not shipowners, or rather, civil servants; is that
5 right?

6 A. Yes.

7 Q. Clarke Steamship, Gerant du Port de
8 Quebec, Comite des Pilotes de Montreal, Mr. Jacques
9 Melanson, Capt. Baxter, Operating Manager, Canada Steamship
10 Lines Limited, the Interlake Steamship Company, Cunard
11 Steamship Company Limited, Mr. A. G. Murphy, St. Lawrence
12 Seaway Authority, Mr. Ripley, St. Lawrence Seaway Authority,
13 Secretary, Shipping Federation of Canada, five copies.
14 I must say that Cunard had 20 copies and the other ones
15 have only one copy. Mr. Rene L'Heureux, St. Lawrence
16 Seaway Authority, Mr. McKenzie, St. Lawrence Seaway
17 Authority, Mr. Burnside, St. Lawrence Seaway Authority,
18 Mr. Rossi, St. Lawrence Seaway Authority, Mr. Bertrand,
19 the St. Lawrence Seaway Authority, Mr. McCaffey, the
20 St. Lawrence Seaway Authority, Steamship Inspection
21 Services. Once more, this is not a marine undertaking;
22 this is a Government service, Division of Transport.
23 Mr. Cameron, Montreal, Pilots' Office, Quebec, Officer
24 Commanding, Marine School. Is Sylvain Cousineau a
25 shipowner or not?

26 A. I don't think so.

27 Q. Mr. H. Gauthier and Mr. A. Choquette?

28 A. They are all people, all owners of
29 yachts, and so forth.

30 Q. Mr. Pierre A. Champagne?



1 A. Also an owner of a yacht.

2 Q. So, if I understand correctly and if we
3 look at the list of the St. Lawrence River, you have a
4 total number of maritime companies receiving your notices
5 of seven, including the Shipping Federation of Canada?

6 A. That is it.

7 Q. So I imagine that the list including
8 Lake St. Louis is about the same one?

9 A Yes. It is about the same one with
10 perhaps one or two additions.

11 Q. So this means that, aside from the
12 companies mentioned on that list, the other companies
13 have, as a means of knowing about the changes in the
14 navigational aids, only the radio messages that you
15 broadcast for a few days after the changes have been brought
16 about?

17 A. Well, this applies for provisional
18 changes. Insofar as the permanent changes are concerned,
19 there are some notices to mariners which are published by
20 headquarters in Ottawa.

21 Q. The legal advisor of the Commission
22 tells me that there are eleven maritime companies in the
23 list entitled "Lake St. Louis", and which is included in
24 Exhibit 468. Now, what do you mean, exactly, by "provisional
25 changes" and "permanent changes"?

26 A. Well, let us take an example. For provi-
27 sional changes, let us say, for example, a buoy which will
28 be displaced during a week or which will have no light
29 for a week, then we publish a notice to that effect, or
30 a shipping notice or a mariners' notice. But if it has to



1 do with a permanent change, that buoy, we will publish
2 this notice and aside from that, in Ottawa they include
3 this notice in the notice to mariners.

4 Q. For example, the change at Pointe du
5 Lac, was that published in an official notice by the
6 Department of Transport?

7 A. Well, I couldn't tell you exactly,
8 because I haven't seen the latest copies of the notice to
9 mariners.

10 Q. According to your own experience, what
11 is the delay between the publication of the notice to
12 mariners published by the Department of Transport in
13 Ottawa of the changes brought about in the navigational
14 aids?

15 A. Normally, the delay may vary from one
16 week to two weeks, everything being dependent upon the
17 time when we can send this notice to Ottawa. It is
18 a question of printing. If it is too near the weekly
19 publication, then it is published the next week.

20 Q. So, there is one or two weeks between
21 the time you send your advice and your notice of it is
22 received by Ottawa. Did it happen that the publication
23 was delayed for more than two weeks?

24 A. Yes. It may have happened in the past
25 because of the lack of staff or a lack of communications.

26 Q. Now, do you think that these provisional
27 changes you have spoken about are important enough at times
28 in order to be recognized as changes that may affect the
29 operation of vessels? Do you think that provisional
30



1 changes may be important enough that a vessel not knowing
2 about these provisional changes may be beached or stranded
3 if he relied only on the previous indications?

4 A. This is very difficult to answer. Well,
5 it could happen if, for example --- let us take the case
6 of dredging or an obstacle, a hypothetical obstacle to
7 navigation where we must proceed, to a considerable dis-
8 placement of the buoy, it may happen that a ship or a
9 vessel may be stranded if it does not know about this
10 displacement.

11 Q. The provisional change you mentioned
12 about the ten buoys, that was a provisiona change?

13 A. Yes.

14 Q. And it took you, before the last buoy
15 was replaced ... ?

16 A. It took us about a whole week.

17 Q. And during all that time the only
18 possible way to know about that change was to refer to
19 the notices sent to the seven or eleven companies I
20 mentioned, including the Canadian Federation of Canada
21 for the radio broadcasts that had been sent?

22 A. At that time it was especially the radio
23 broadcast, becausd the situation was changing from one
24 day to another, because certain of these buoys could be
25 lit again and others that were replaced shortly and others
26 still that we could not touch before a week had lapsed or
27 perhaps even more than a week.

28 Q. Do you know if in the list I have
29 mentioned previously the maritime companies I mentioned
30 are especially lake vessel companies or ocean-going vessel



1 companies?

2 A. Well, at least there is Cunard which is
3 sea-going vessels and Clarke Steamships, which is a coastal
4 vessel company as much as a lake vessel company.

5 Q. Interlake Shipping, do you know about
6 it?

7 A. Perhaps on the Great Lakes.

8 Q. Canada Steamship...?

9 A. Well, the Canada Steamship is either on
10 the lakes or rivers.

11 Q. Quebec & Ontario Transportation Company..?

12 A. I do not know anything about that
13 company.

14 Q. Upper Lakes?

15 A. I can tell you that it is a lake company.
16 That is all.

17 MR. LALONDE: My lord, would it be possible to
18 obtain from the Regional Maritime Agent of Quebec, who
19 was a witness yesterday, Mr. Gaudreau, the same list
20 that has been given to us by Mr. Paquette this morning?

21 THE CHAIRMAN: Certainly. The Counsel for
22 the Commission is going to give it.

23 MR. JACQUES: If the list exists we are going
24 to give it.

25 THE CHAIRMAN: If the list does not exist,
26 we will ask him who puts out the notice and to whom these
27 notices are sent.

28 MR. LANGLOIS: I would suggest that we get,
29 from the Department in Ottawa, the list of standing
30 notices sent to seamen or the list of shipping notices.



1 MR. JACQUES: We will wait for the cut, my
2 lord.

3 THE CHAIRMAN: Are there any questions of Mr.
4 Paquette? I have a question to ask Mr. Paquette.

5

6 BY THE CHAIRMAN:

7

8 Q. You mentioned before that in Spring time
9 the level of water affected the departure of ice and you
10 said that the level was quite low at the present time?

11 A. Yes, my lord.

12 Q. Is it normal for the level to be as low
13 as it is this year?

14 A. Well, for the past two or three years this
15 situation has become normal.

16 Q. What are the factors which have contri-
17 buted to the decrease in the level?

18 A. Well, to my own knowledge, these factors
19 are of a controlling order and also a decrease in the
20 range in the basin of lakes:

21 Q. And this control factor you are talking
22 about, who controls such a factor?

23 A. Well, this factor is controlled by the
24 authorities, but exactly which authority decides, I think
25 that perhaps the people from the service of the St.
26 Lawrence Seaway could be more competent to answer this
27 question. I could tell you that one of the reasons this
28 control has been done is to keep enough water for the
29 very low level of waters during the Fall.

30 Q. Now, this difference in levels in the



1 Spring time, at the time of thaw, what is the difference
2 in inches from one year to the next, what the level was
3 before and what it is now?

4 A Well, previously it was possible for
5 waters to reach a level of ten feet above the minimum
6 level, whilst today when it reaches six feet or six and a
7 half feet it is about the maximum.

8
9 BY COMMISSIONER SMITH:

10
11 Q. Arising out of the answer that you gave
12 to Mr. Lalonde about the lowering of the level of the
13 water and some difficulty in placing or holding the
14 buoys in place --- I am not using your exact language,
15 but you know what I mean --- I would like to ask you
16 this question: If the ice breaking on the St. Lawrence
17 River is accelerated, will that progressively increase
18 the difficulties with regard to your placement and other
19 operations in connection with the buoys?

20 A. Are you asking if it will increase or
21 decrease?

22 Q. If it will increase the difficulties?

23 A. If the ice breaking operations are in-
24 creased, it won't increase our difficulties. I don't
25 think so. The problem that we are facing in the placing
26 of the buoys is due to the shore ice that sticks to the
27 shore longer, due to the lower level of the water at that
28 time in the Spring, and that low water is due, in turn,
29 to the control on the upper section of the river.

30 Q. Yes. Perhaps I misunderstood the answer.

The first part of the paper discusses the importance of the study and the objectives of the research. It then proceeds to a literature review, followed by a description of the methodology used. The results of the study are presented in the next section, followed by a discussion of the findings and their implications. The paper concludes with a summary of the main points and a list of references.

The study was conducted in a laboratory setting, using a series of experiments to measure the effects of the treatment. The results show that the treatment has a significant effect on the outcome, and that the effect is consistent across all groups. The findings suggest that the treatment is effective in improving the outcome, and that it may be useful in clinical practice.

The study was limited by a number of factors, including the small sample size and the lack of a control group. However, the results are promising and warrant further investigation. The authors hope that this study will provide a basis for further research and that it will lead to the development of more effective treatments.



1 I thought that your answer was that because of the ice-
2 breaking, the water was lower?

3 A Yes. Well, it is lower. No, that is
4 not what I meant.

5 Q. I might be misquoting you.

6 A What I meant exactly is that the ice-
7 breaking has increased a little bit, or has placed the
8 date of placing the buoys a little sooner, due to the fact
9 that the channel is free a little sooner than it was
10 before.

11 Q. Earlier in the year?

12 A. Yes.

13 COMMISSIONER SMITH: Thank you.

14 THE WITNESS: But it didn't increase the
15 difficulties.

16 THE CHAIRMAN: We will take a short recess.

17

18 ---Short Recess.

19

20

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F/BL/RPS

MR. JACQUES: The District Marine Agent
of Prescott, please.

J.S. BARRICK, Sworn

DIRECT EXAMINATION BY MR. JACQUES:

Q. You are the District Marine Agent for the
Prescott agency, are you not?

A. Yes.

Q. Would you state the limit of this agency?

A. The Prescott agency extends from the upper
Seaway and Lake Ontario, including the Bay of Quinte, Lake
Erie and the Detroit River, Lake St. Clair, and terminating
at Point Edward, Ontario.

Q. If you wish, we shall limit ourselves to
that portion of the District extending from Bois --
to Kingston, please. In that portion of your District, are
you able to tell the Commission the aids to navigation which
are available?

A. Unfortunately, I haven't got the number of
lights broken down into that particular District. I can give
you the total in the whole District. I can give you the total
between Beauharnois and Kingston.

MR. JACQUES: If it pleases your lordship, perhaps
it would be better to have the witness compile the requested
information for the whole of his District, which includes the
Great Lakes. I wonder if your lordship finds it advisable to
have this evidence in Montreal and we could use it when we
hear the Great Lakes people.

MR. LALONDE: My lord, I understand that the King-





1 ston pilots will be called upon to speak to Kingston as well
2 as Lake Ontario, and in this regard I would also suggest it
3 would be advantageous to have this witness examined in that
4 respect also.

5 THE CHAIRMAN: That is quite all right.

6 Q. Could you give the aids to navigation,
7 give the number of aids?

8 A. There are 329 radio shore aids, 33 fog
9 signalling devices, 278 lighted floating aids and 88 unlighted
10 floating aids.

11 Q. Now, these floating aids, would they include
12 lightships?

13 A. I have no light ships in the Prescott
14 agency.

15 Q. So they would be lighted buoys or unlighted
16 buoys as the case may be?

17 A. Yes.

18 Q. Have you prepared any statistics on the
19 efficiency of these aids?

20 A. For the year 1962, one hundred and twenty-
21 two aids were reported extinguished or defective. Of these,
22 66 required notices to shipping, the remainder didn't require
23 notices, and twelve were struck by vessels.

24 Q. Now, do these failures cover shore-based
25 aids and floating aids?

26 A. That is correct.

27 Q. Are you able to give a breakdown of failures
28 of these two classes of aids?

29 A. Not today. I haven't those figures available
30



1 Q. To the best of your memory, what would be
2 the percentage of failures for the floating aids?

3 A. I would suggest possibly seventy per cent
4 would be floating and 30 per cent would be shore-based aids.

5 Q. So the greater number of failures occurred
6 in the floating aids?

7 A. That is correct.

8 Q. You also mentioned a certain number of
9 failures required notices to shipping and others did not?

10 A. That is correct.

11 Q. Would you explain how you differentiate
12 those two cases?

13 A. In any case where the aid could not be
14 repaired the same day, in other words, the light would be
15 out during the night, this required a notice to shipping.

16 Q. How long does it take before you can
17 repair an aid?

18 A. This depends, of course, on where it is
19 located in the District. Normally they are repaired within
20 24 hours.

21 Q. And what equipment have you got at your
22 disposal to service and repair these aids?

23 A. We have two ships; we also have two mobile
24 units, a stationwagon with boat and trailer attached which
25 can be dispatched to where the aid is reported out.

26 Q. Is this equipment based at Prescott?

27 A. That is right.

28 Q. How long would it take to go to the western
29 extremity of your District?

30 A. At the western extremity, if an aid is



1 reported defective, we have people employed in this
2 particular area who are responsible to repair them, and
3 would notify them and they would have equipment which is
4 available and which can be on the site within a short
5 period of time.

6 Q. What area would these people cover?

7 A. This is the area between Amherstburg.

8 Q. What covers this area?

9 A. It is covered by the base at Prescott.

10 Q. Can you tell the Commission about
11 improvements to aids to navigation last year or the year
12 before last?

13 A. Well, that is a continuing process. At
14 the Prescott branch we conduct in a small way a research
15 and development branch. As to improvements last year, there
16 were sixty-six additional aids supplied in the system;
17 forty-nine of this total were lighted buoys, out of the
18 sixty-eight additional aids requested.

19 Q. You mentioned a research committee, I
20 believe, in your District?

21 A. That is correct.

22 Q. Or research team. Would you tell us more
23 about it? How does it function?

24 A. We work in close liaison with the National
25 Research Council, also with the American Coast Guard. Also
26 the Department of Transport is a member of the International
27 Lighthouse Association. All these agencies work together to
28 bring forward any new developments in aids to navigation and
29 any new techniques which come to light.

30 Q. Would you have any pilots on this research



1 team or representative of the pilots?

2 A. No.

3 Q. Representatives of the shipowners?

4 A. No.

5 Q. When you discuss any changes to navigation
6 or improvements do you seek the opinion of the pilots and/or
7 shipowners?

8 A. I personally seek the advice periodically
9 of the ship masters and not shipowners or pilots.

10 Q. Have you ever had any request on the part
11 of pilots to take part in these discussions and research?

12 A. Not personally, no.

13 Q. To your knowledge, have they ever approached
14 anyone in your Department in that respect?

15 A. I couldn't say.

16 Q. Any changes which are made in the aids is
17 published, I imagine, as it has been in other Districts;
18 is that correct?

19 A. That is correct.

20 Q. Would you outline this procedure which is
21 followed to advise shipping of changes?

22 A. I understand you mean the changes -- this is
23 not repairs to defective aids?

24 Q. No, changes.

25 A. Well, it is drafted in the agency in the
26 form of a draft notice to mariners, and this is forwarded to
27 the Chief of Aids in Ottawa and is just as it is published in
28 the notice to mariners.

29 Q. Are these notices sent before the change
30 becomes effective?



1 A. Yes, they are published as soon as possible
2 after it has been decided to make the change, and normally
3 it would be a month or even longer before the change is made.

4 Q. So the notice is out before the change
5 is actually made?

6 A. Yes.

7 Q. Is that fact promulgated in any fashion,
8 apart from its mention in the notice?

9 A. The notice to mariners in my knowledge
10 is the only way it is promulgated; except if it is far enough
11 in advance the Hydrographic Service would make a change in
12 the chart at this same time.

13 Q. Is there any notice sent to ships in
14 regard to aids to navigation?

15 A. Yes.

16 Q. Would you tell us about that?

17 A. Immediately we get advice of a change in
18 an aid a broadcast notice is sent to ships immediately below
19 and above the reported area. Included in the notice is the
20 name of the lights, the chart number and any other applicable
21 information.

22 Q. You were in court when Mr. Paquette supplied
23 the Commission with a list of people to whom he sent notices?

24 A. Yes.

25 Q. Do you have a similar list?

26 A. Yes.

27 Q. Would you be able to supply the Commission
28 with your mailing list?

29 A. Yes. I haven't got one today.

30 Q. We realize that, but would you send it to the



1 Commission?

2 A. Yes.

3 MR. JACQUES: Might we give it a number now,
4 my lord?

5 THE CHAIRMAN: Exhibit 469.

6 MR. JACQUES: 469 will be the mailing list of
7 notices to shipping sent from the Prescott agency.

8

9 ---EXHIBIT NO. 469: Mailing list of notices to
10 shipping sent from the Pres-
cott agency.

11

12 Q. Do you have any radio aids in your
13 District?

14 A. Yes, we have seven radio beacons in the
15 District.

16 Q. When do they operate?

17 A. During the navigation season.

18 Q. What is the navigation season?

19 A. From April the 15th until December the 10th.

20 Q. Are these dates fixed dates or can they
21 vary?

22 A. They can vary two or three days, depending
23 upon the position of the locks in the lower St. Lawrence River.

24 Q. Do you take up your buoys in the winter?

25 A. Yes.

26 Q. Do you keep the other aids operative?

27 A. No, there is no navigation.

28 Q. There is no navigation at all?

29 A. There is some small navigation in the Detroit
30 River between Detroit and Toledo and some of these places; we



1 keep our range lights operating during the winter there.
2 Actually there are some in the Livingstone channel; they
3 are not actually plying in Canadian waters.

4 Q. Are all your aids, buoys and floating
5 aids to navigation installed and in operation before the
6 first ship comes through?

7 A. Yes.

8 Q. Is that invariably the case?

9 A. There might be some positions where it is
10 impossible, due to ice, to place a buoy, but I would say
11 that less than two per cent of buoys are in such a category.

12 Q. Do you find that buoys or other floating
13 aids are often out of position in your District?

14 A. I would say that twelve last year were
15 reported out of position.

16 Q. Do you recall how far out of position they
17 were?

18 A. This varied, of course.

19 Q. What would be the worst case?

20 A. Possibly 300 feet.

21 Q. In what area would that be, what place?

22 A. This particular area was in Lake St. Francis

23 Q. Would you consider that in this particular
24 case there was danger to navigation?

25 A. Yes, I would think it presented a danger --
26 with any buoy out of position.

27 Q. How long would it have been out of position,
28 do you recall?

29 A. Roughly about four hours.

30 Q. Do you recall if there were any accidents



1 during that period of time?

2 A. No.

3 Q. Was there any traffic during that period
4 of time?

5 A. Yes.

6 Q. What period was it?

7 A. From memory, I would say from August to
8 September. I can't remember exactly.

9 Q. Is that a busy month?

10 A. Yes, it is.

11 Q. Are you able to say whether the efficiency
12 of your aids to navigation has remained stationary over the
13 years or has it increased?

14 A. No, I think they are continually improving
15 the efficiency of aids to navigation.

16 Q. And range lights?

17 A. Yes.

18 Q. Are these range lights equipped with an
19 emergency system?

20 A. Yes.

21 Q. Is that system similar to that described
22 by Mr. Paquette?

23 A. No, they are not similar.

24 Q. Would you describe it, please?

25 A. We are not similar.

26 Q. Would you describe it, please?

27 A. We are now using a new range light which
28 has been developed in the last two years which operates on
29 hydro power and has a battery standby, one hundred and ten
30 volts and reduced by transformer down to twelve volts, which



1 means that it is still operative whether it is on battery or
2 one hundred and ten volts, the same intensity is maintained.

3 Q. Whether the emergency or regular system is
4 on?

5 A. Yes, that is right.

6 Q. Do you have any instance of a complete
7 failure of range lights, that is the emergency system and the
8 regular system?

9 A. No, not to my knowledge.

10 Q. How long has this system been in operation?

11 A. This has been available -- the research and
12 development on it has been going on for some number of years,
13 but they came on the market about a year ago.

14 Q. How many of them would you have installed
15 in your District?

16 A. I think, just from memory, I would say
17 seventy-five per cent of our ranges are now installed with
18 the new type of equipment.

19 Q. Are they gas buoys or electric buoys?

20 A. Most of them are electric.

21 Q. Electric buoys?

22 A. Yes.

23 Q. In these failures of your aids have you been
24 able to see a pattern as to when and where they failed, or is
25 it indiscriminate?

26 A. I would say it was indiscriminate, it doesn't
27 follow any pattern.

28 Q. There is no area where there are more failure
29 than elsewhere?

30 A. No.



1 Q. Now, sir, did you have any sea experience
2 before becoming an agent?

3 A. I had five years in the Royal Canadian
4 Navy, a year and a half of which I was in command of a mine-
5 sweeper.

6 Q. Have you ever had any reports of obstruction
7 in channels?

8 A. Not of a permanent nature, no.

9 Q. Would you describe those which were reported
10 to you and which apparently were of a temporary nature?

11 A. These were minor collisions with ships
12 striking lock walls, but at no time were they blocking the
13 channel for any period of time.

14 Q. It has never happened in your District that
15 there has been an accident blocking the channel?

16 A. No.

17 Q. But if a ship were to sink outside of a
18 lock, would that impede or prevent traffic in that area?

19 A. Well, if you want my personal opinion, yes,
20 I think it would. I don't think I am qualified to answer some
21 of these questions.

22 Q. But it is your opinion that it would at
23 least disrupt traffic?

24 A. Yes.

25 Q. These obstructions or accidents which are
26 reported to you, do you know whether they were deep sea vessels
27 or lake vessels?

28 A. I think the majority of them were foreign
29 trade vessels.

30 Q. Do you have any unwatched aids, apart from
your buoys, of course?



1 A. Yes, we have seventeen such stations.

2 Q. Unwatched?

3 A. Unwatched.

4 Q. Are these stations equipped with the
5 emergency system?

6 A. Yes.

7 Q. Are all these stations equipped with
8 the emergency system?

9 A. They are all equipped with emergency
10 lighting, yes.

11 Q. So all your unwatched aids would benefit
12 from this emergency system?

13 A. That is correct.

14 Q. Which so far has not broken down?

15 A. That is correct.

16 Q. Have you ever had any report of damage
17 done to your aids by ships?

18 A. We have aids damaged by ships, but very
19 few of them are reported. These are discovered by sub-
20 sequent ships passing. There are very few of them reported.

21 Q. Have you got any inspection team in your
22 District?

23 A. Yes.

24 Q. Would you describe its work?

25 A. First of all, the two ships do periodic
26 checks in the particular area they are working in.

27 Q. How often?

28 A. I would say at least once every three
29 weeks. Besides this I have a maintenance crew which are
30 mobile, which make periodic inspections of all shore aids



1 every three weeks.

2 Q. That is throughout your District, is it?

3 A. That is right.

4 Q. Is this frequency of inspection enough
5 to maintain your aids operative during the season?

6 A. I think so.

7

8 CROSS-EXAMINATION BY MR. LALONDE:

9

10 Q. How long have you been District Marine
11 Agent?

12 A. Since 1955.

13 Q. Is there any charge to shipping in your
14 District for the services provided, the navigational aids,
15 etcetera, such as light dues, buoy dues, or whatever these
16 things could be termed?

17 A. No, there is no charge.

18 Q. That is free?

19 A. Yes.

20 Q. You said that for making changes and
21 improvements you did consult shipmasters. Did you receive
22 any special representations from the shipmasters?

23 A. Not myself personally. I have attended
24 the meetings that have been held by the Dominion Marine
25 Association each year. These recommendations are passed
26 on to the Chief of Aids.

27 Q. Do you mean in Ottawa?

28 A. Yes.

29 Q. But didn't you say you had meetings with
30 the shipmasters?



1 A. I said that I have periodically consulted
2 shipmasters on my own initiative.

3 Q. Is there any particular reason why you
4 didn't consult the pilots in that regard?

5 A. No, except that during the eight years
6 I have been agent I can only remember twice the pilots
7 ever inquired about an aid, or consulted the Prescott
8 office.

9 Q. How often did you get representations
10 from the shipmasters in the same regard in the last
11 eight years?

12 A. This happened once a year

13 Q. Yes, at the Dominion Marine Association
14 meeting?

15 A. Yes.

16 Q. You go there?

17 A. Yes.

18 Q. How often did you get representations
19 from shipmasters, directly to you, outside any official
20 meetings such as the Dominion Marine Association?

21 A. This is difficult to recall. I would
22 say possibly seven or eight times.

23 Q. A year?

24 A. No, a total of seven or eight.

25 Q. Would it be fair to say that aside from
26 these official meetings you might have at the Dominion
27 Marine Association meeting, you don't get more direct
28 representation from shipmasters than from pilots with
29 regards to navigational aids, directly?

30 A. You are talking about to myself?



1 Q. Yes?

2 A. Yes, that is correct.

3 Q. Well, is there any particular reason why
4 you find it profitable to consult shipmasters and not to
5 consult pilots?

6 A I would say that the only reason I
7 personally contacted the shipmasters is that they were
8 available and the pilots weren't. At the particular time I
9 was on a ship the pilot had usually taken off, and of
10 course the shipmaster was still on board.

11 Q. Do you mean these consultations didn't
12 take place in your office?

13 A. No. These are on board ship.

14 Q. You said that the pilots weren't on
15 board the ship at the time?

16 A No.

17 Q. You mean that the ship was stopped
18 at the quay, or wharf, is that it?

19 A. Yes, that is it.

20 Q. And these shipmasters you consult, are
21 they mainly shipmasters of lakers, or ocean-going ships?

22 A. Mostly lakers.

23 Q. Do you remember any instance where you
24 contacted shipmasters of ocean-going ships?

25 A. Yes, on one or two occasions.

26 Q. That is out of the eight you mentioned
27 for the last seven or eight years?

28 A. No. That is included in that.

29 Q. You say about eight times, and then you
30 would have six times which would be consultations with



1 lake masters?

2 A. Yes.

3 Q. Do you remember which ocean-going masters
4 you did consult?

5 A. No, I can't remember the names of the
6 ships, or the names of the captains, but I can tell you they
7 were the Fjell Line.

8 Q. Out of the ships which pass in your
9 District, would there be a greater number of ocean-going
10 ships than lakers?

11 A. I am not in a position to answer that.
12 I don't know.

13 Q. Were you invited to the Dominion Marine
14 Association meetings, or did you go on your own?

15 A. I was invited.

16

17

18

19 *MR. Jacques: Q.* Were you ever invited by the pilots?

20 THE WITNESS: No.

21 Q. Did you ever receive representations
22 from Ottawa to the effect that pilots had made some
23 representations to Ottawa concerning certain navigation
24 aids?

25 A. No. I was not aware that they came
26 from pilots.

27 Q. Did you ever receive advice from Ottawa
28 that certain representations had been made concerning
29 certain navigation aids?

30 A. Yes.



1 Q. But you never knew whether they were
2 made by pilots or not?

3 A. That is correct.

4 Q. And it never occurred to you that it
5 might be a good idea to consult the pilots before making
6 a change in navigation aids?

7 A. No.

8 Q. Do you think it would be a good idea?

9 A. I think so.

10 Q. You mentioned that you had temporary
11 obstructions in the channel in your section?

12 A. No. There has been no obstructions
13 in our District.

14 Q. Was there not a ship called the
15 "Andora" which had a serious accident about four or five
16 years ago?

17 A. That is right.

18 Q. And was not shipping stopped for a whole
19 day in that connection?

20 A. No. She was out of the channel.

21 Q. Traffic was not delayed at all?

22 A. No, not unless it was delayed in the
23 locks. I don't know whether it was or not, but it wasn't
24 delayed in the main channel.

25 Q. But it could have been delayed in the
26 locks, and you wouldn't know?

27 A. It could have been. Yes.

28 Q. You are quite sure that traffic was not
29 delayed in your section?

30 A. To the best of my knowledge, I don't think



1 it was delayed.

2 Q. You are aware of anchorage buoys below
3 Canada Island?

4 A. Yes.

5 Q. What colour are these buoys?

6 A. White.

7 Q. And what are their characteristics?

8 A. They are spar buoy types, painted white.

9 Q. Do they have a light?

10 A. Yes.

11 Q. Which colour?

12 A. White also.

13 Q. And the buoys?

14 A. They are painted white.

15 Q. Upon whose representations did you
16 decide to install these buoys?

17 A. I couldn't tell you that. I don't know.
18 The representation was made to the Chief of Aids in
19 Ottawa, and who made it I don't know.

20 Q. Did you ever receive representations
21 to the effect that these buoys would be obstructing
22 other navigation aids, such as the Canada Island light,
23 in that area?

24 A. I never received such' a complaint.

25 Q. Have you personally inspected the
26 service at that particular place?

27 A. Yes.

28 Q. By night?

29 A. No, not by night.

30



1 Q. And you wouldn't have received from
2 Ottawa any representations, either in that respect to
3 the effect that the light on Canada Island would be
4 obstructed by these buoys?

5 A. No, I haven't.

6 Q. Which side of the channel are these buoys
7 on?

8 A. On the starboard side.

9 Q. Excuse my ignorance, but is it the usual
10 side to have white buoys on?

11 A. No. You would have a red buoy on the
12 starboard side.

13 Q. Is there any particular reason why these
14 white buoys have been --- you have installed white buoys
15 on the starboard side?

16 A. Except to indicate it was an anchorage
17 area.

18 Q. And you feel that this is the --- there
19 is no danger of confusion of any sort in that respect?

20 A. I don't think so, no.

21 Q. Did you ever receive representations
22 to the effect that white buoys would be difficult to
23 see in daytime, especially when the sun is facing the
24 ship?

25 A. Yes, I did.

26 Q. And have you ever considered any change,
27 or improvements in that regard?

28 A. Yes, this is under consideration at
29 the present time.
30



1 Q. Have you reached any conclusion in that
2 respect?

3 A. Not yet.

4 Q. How long has this been under consideration?

5 A. For the last six weeks.

6 Q. You are aware of certain aids being
7 installed by the American authorities in your section?

8 A. Yes.

9 Q. You are aware of a light at Chapman's
10 Shoal?

11 A. Is this an American light you are
12 referring to?

13 Q. An American light.

14 A. Yes, I know the general area, but I don't
15 know this particular light you are referring to.

16 Q. You wouldn't be aware that there is a
17 white flashing light on the right side of the channel up-
18 bound?

19 A. No, I don't recall.

20 Q. At that place?

21 A. No.

22 Q. What kind of arrangements are there
23 between the American and the Canadian authorities con-
24 cerning navigation aids in your section? Is there any
25 arrangement?

26 A. There is no arrangement, no.

27 Q. No consultation whatever?

28 A. No.

29 Q. Each authority ---
30



1 A. Each authority looks after their own
2 section.

3 Q. Is there any difference at all in the
4 techniques of navigation aids on the American side and the
5 Canadian side?

6 A. To the best of my knowledge, they are
7 fairly similar.

8 Q. Would this mean that it might be different?

9 A. In some instances.

10 Q. Do you have any instances in mind?

11 A. No.

12 Q. Has there ever been consideration given
13 to coordination between the American and the Canadian
14 authorities in their respective navigation aids in your
15 section?

16 A. Not to my knowledge.

17 Q. Would any such consultation, or coordina-
18 tion, be useful at all?

19 A. I think so, yes.

20 Q. What advantages would you find in that?

21 A. Well, we are dealing with international
22 waters here, and their problems are similar to ours, and we
23 would probably learn something from each other.

24 Q. If for some reason the St. Lawrence Seaway
25 Authority would decide to stop traffic for some time, maybe
26 a few hours, or half a day, or whatever it might be, would
27 you automatically get notice of that fact?

28 A. Yes.

29 Q. And you don't remember in the "Andora" case
30 having received any notice from the St. Lawrence Seaway



1 Authority?

2 A. I don't recall any.

3 Q. How many employees do you have, or how
4 big is your personnel?

5 A. There are 35 people employed in the
6 office staff, and 35 in the shops, and there is personnel
7 on two ships, amounting to roughly 60 people. There are
8 roughly 70 light keepers, and I think there are 85 wharfin-
9 gers and harbourmasters.

10 Q. Do you have any idea of the cost of
11 administration in your section?

12 A. The total cost last year was \$1,170,832.09.

13 Q. What is the reason for the nine cents?

14 A. That includes the operation of the
15 Dominion Steamers. It also includes --- \$222,000.00 of
16 manufacturing that is conducted at Prescott.

17 Q. Do you manufacture anything for other
18 Districts, or sections?

19 A. Yes.

20 Q. Do you mean all across Canada, or
21 certain specific Districts?

22 A. No. All across Canada.

23

24

25

26

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30



1 Q. Sir, you have mentioned that there were
2 seven radio aids in your sector. Would you describe to us
3 what they are?

4 A. These are radio beacon stations and they
5 are located at Point Peter and Main Duck Island; in Lake
6 Ontario, Burlington, Port Weller, Long Point, Port
7 Colborne and the South East Shoal.

8 Q. You have told us that the aids to naviga-
9 tion were, in the great majority, all placed before naviga-
10 tion started each year. Am I right in thinking that they
11 are taken out after the closure of navigation, at the end
12 of the season?

13 A. This is correct, except for one location
14 in the Detroit River. Due to icing conditions in the early
15 part of December, it is sometimes necessary to remove them
16 before the navigation season is closed. The radio buoys
17 are marked with unlighted markers.

18 Q. Is there any liaison between your office
19 and the United States Coast Guard and the St. Lawrence
20 Seaway Authority?

21 A. There is fairly close liaison with the
22 St. Lawrence Seaway Authority and, to some extent, with
23 the United States Coast Guard in the international waters
24 section.

25 Q. Do you have any jurisdiction over the
26 locks themselves?

27 A. No, I have not.

28 Q. This is solely within the jurisdiction
29 of the Authority?

30 A. That is right.



1 Q. Do you have anything to do with the
2 control of traffic, speed, and so forth, in your sector?

3 A. No.

4 Q. You would not issue notices to mariners,
5 advising that in a certain sector the speed must not exceed
6 so many miles?

7 A. We haven't, in my particular district,
8 we have never done this. We have sometimes asked them to
9 reduce speed, consistent with safe navigation, to protect
10 some shore works or something that was going on.

11 Q. How is that handled when you have to
12 make such requests?

13 A. This is normally broadcast, the same way
14 as we broadcast notifying that an aid was out. It is
15 handled the same way.

16 Q. You mentioned that you do not receive
17 reports of damage done by ships to the aids to navigation
18 in your sector. Would you think that it would be dangerous
19 to have, for instance, pilots in charge of ocean ships
20 report such incidents?

21 A. Yes, it would.

22 Q. Do you know whether such incidents are
23 reported to the Pilotage Authority in the various sectors?

24 A. I wouldn't know whether they were or
25 not.

26 Q. But if these incidents are reported, you
27 do not receive from the Pilotage Authority any notification?

28 A. No.

29

30



1 CROSS-EXAMINATION BY MR. LANGLOIS:

2

3

4

Q. Do you receive the reports of all shipping casualties in the district?

5

6

7

A. Yes; not complete reports, but I am usually notified from the radio stations of any casualty that takes place.

8

9

Q. Are you informed of the results of investigations into these shipping casualties?

10

11

A. No, I am not.

12

13

14

Q. So am I to understand that it is impossible for you to state as to whether or not some of those casualties were due to failures of your aids to navigation?

15

16

A. That is correct.

17

18

Q. Now, mention was made of these anchorage buoys; would you mind telling the Commission what is the shape of the buoys?

19

20

21

22

23

A. There are two, as I recall, two lighted buoys on the channel side. These are cylindrical buoys, six feet in diameter with a super-structure roughly seven feet high, with a two-hundred millimeter light mounted on top.

24

25

Q. What type of construction?

26

A. It has a steel super-structure with a radar reflector installed in it.

27

28

Q. The super-structure on a port or star-board buoy is the same?

29

30

A. That is correct. They are all exactly the same type of buoy.



PE/RPS 1

2 Q. Are you kept informed of the changes and
3 modifications to aids to navigation on the American side?

4 A. Yes. We have a fairly close liaison with
5 the engineering branch in the United States Coast Guard.
6 We may not be aware of the improvements until a later date,
7 but we eventually get the knowledge.

8 Q. Do you promulgate or broadcast such
9 information received from the Americans as to modifications
10 or temporary failures of their aids to navigation? Do you
11 broadcast that to mariners?

12 A. This is failure of American aids you are
13 speaking of now?

14 Q. Yes?

15 A. I have, on occasion, at the request of the
16 American authorities, made a broadcast of a failure of an
17 aid.

18 Q. They are about failures. Changes . . . ?

19 A. Not changes.

20 Q. Not changes?

21 A. No, just failures.

22 Q. You do so only on request from the Americans?

23 A. I have never broadcast anything that
24 entailed information about changes. This was strictly aids
25 that had failed and they wanted people notified.

26 Q. But even in connection with failures, you
27 do so only when you are requested?

28 A. That is correct.

29 Q. By the Americans?

30 A. This is only for American aids, actually.

MR. LANGLOIS: Thank you, sir.



1 MR. JACQUES: I have no further questions of the
2 witness. Unless the Commission has any, may the witness be
3 excused, my lord?

4 THE CHAIRMAN: Yes.

5 MR. LALONDE: My lord, I have been requested to
6 represent certain pilots on the Great Lakes, particularly in
7 Districts numbers 2 and 3 and I am not in a position at the
8 present time to know exactly whether I should pursue the
9 line of questioning of this witness in that particular
10 District too and I have doubt that it would be necessary for
11 this witness to be recalled; but would it be possible to
12 make further representations to the Commission if this were
13 to prove necessary, in Toronto?

14 MR. JACQUES: If your lordship pleases, I can
15 recall this witness when we are sitting in Toronto.

16 MR. LALONDE: Thank you very much.

17 THE CHAIRMAN: I do not think it would be advis-
18 able, at this late hour, to call another witness. We will
19 adjourn until 2:30 this afternoon.

20

21 ---LUNCHEON ADJOURNMENT.

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AA/BL/RPS ---ON COMMENCING AT 2:30 P.M.

2
(English)

3 MR. JACQUES: Mr. Burnside, please?

4
5 R.J. BURNSIDE, Sworn

6
7 DIRECT EXAMINATION BY MR. JACQUES:

8 Q. Would you state your full name and age,
9 sir, please?

10 A. R.J. Burnside, fifty-nine.

11 Q. And what is your occupation?

12 A. Director of Operations of the Seaway.

13 Q. How long have you been employed in that
14 position?

15 A. Since the Seaway opened in 1959. Actually
16 since 1958, December, 1958.

17 Q. Before we go any further, would you tell
18 the Commission the limits of the St. Lawrence Seaway?

19 A. The Seaway starts from Montreal harbour
20 and extends to Lake Erie through the Welland Canal.

21 Q. So its western limit would be approximately
22 Port Colborne?

23 A. That is right.

24 Q. And from Montreal to Port Colborne?

25 A. Yes, that is right.

26 Q. At my request have you prepared a description
27 of the Seaway locks and canals and navigational aids in the
28 Seaway?

29 A. I have a verbal description which I propose
30 to give. I do not have a written description as such.



1 Q. That is perfectly all right, sir. Would
2 you give us that description, please?

3 A. Well, the Seaway consists essentially of
4 the South Shore Canal extending from the Montreal harbour
5 to Lake St. Louis, the Beauharnois Canal from Lake St.
6 Louis to Lake St. Francis. Then comes the American Canal,
7 Vendero, from Lake St. Francis to Lake St. Lawrence --
8 this is in the Cornwall area -- and the Iroquois Canal from
9 Lake St. Lawrence to the St. Lawrence River immediately
10 upstream from Iroquois. This may be further described as
11 the area from Montreal harbour to St. Lambert lock a dist-
12 ance of about three miles; the St. Lambert lock to St.
13 Catherines Lock, a distance of about nine miles, which is
14 an enclosed area and is a canal channel proper; and then
15 from St. Catherines Lock to Beauharnois, crossing Lake
16 St. Louis, a total distance of 20 miles, and then to the
17 Snell Lock. Now, from the Snell Lock to the Eisenhower Lock,
18 the U.S. part of the channel, is some five miles long. Then
19 from the Eisenhower Lock across the St. Lawrence to the
20 Iroquois Lock, some 25 miles. Now, from the Iroquois Lock
21 to Lake Ontario is a distance of 76 miles, a total distance
22 of 188 miles. The lift there is approximately 228 feet,
23 consisting of seven locks, five of which are Canadian and
24 two American. Channel widths in this area vary from 225 feet
25 wide to 600 feet wide, depending on the conditions.

26 Further, to describe the remaining portion of the
27 Seaway, which is the Welland Canal, it consists of eight
28 locks extending from Lake Ontario to Lake Erie, a
29 distance of 27 miles, and the prism bottom has a width of
30 192 feet.



1 That is essentially the composition of the Seaway
2 which consists, as I am sure everybody knows, of an area under
3 the control of Canada, the Seaway Authority and the area under
4 the control of the United States partner, the Seaway Develop-
5 ment Corporation.

6 Now, within that composition there are the lake
7 areas which have been covered and which are not directly under
8 the control of the Authority or the Development Corporation,
9 except for the dispatch of ships; they are administered and
10 maintained by others. The reason that the areas extend
11 beyond the physical boundaries of the canals proper is to
12 afford efficient dispatch in that there must be provision
13 between the initial dispatch station where the ships are
14 contacted for dispatch and the next lock for the ship to be
15 brought to anchor, if the necessity arises due to congestion
16 of locks or some difficulty, a navigational accident or
17 something of the order, a breakdown of equipment, that would
18 require the vessels to be brought to anchor. Now, this
19 would occur if the ships were in greater volume than could
20 be accommodated at the entrance walls of the locks. Normally,
21 we can tie about two lockages at the entrance to each lock,
22 which would be two large vessels or might be four small
23 ones. If you got beyond that capacity the vessels would
24 be forced to anchor at some hazard to themselves, particularly
25 in the downbound direction in that they would be attempting
26 to anchor in narrow channels. Many of them could not do so and
27 would be forced to probably nose into the banks to avoid lying
28 across the channels, and that is the reason why the dispatch
29 areas are extended beyond the immediate canal sections.

30 Q. Now, sir, to come back to the physical operat



1 of the Seaway, you mentioned several locks, and I think you
2 mentioned the Iroquois Lock 25 miles long?

3 A. No, the distance from the Eisenhower lock
4 to the Iroquois Lock.

5 Q. Would you describe your locks?

6 A. There is 776 feet between the breast wall
7 and the fender boom.

8 Q. Would you explain to the Commission what
9 is a breast wall and a fender boom?

10 A. A breast wall is a concrete piece on which
11 the upper lock gates swing. It is very similar to a double
12 set of doors really, and they are sometimes referred to as
13 doors. The sill of the lock is the same as a sill of a normal
14 door and is the water seal at the bottom. The water seal is
15 made by the impingement at the bottom of the lock and the
16 sill comes up against the bottom and the two gates come together
17 at an angle, and that forms the water seal along the edge of
18 the gates. All the gates are double on this system, there are
19 two gates which swing.

20 Now, a fender boom is essentially a steel cable
21 which is extended across the lock wall in front of the second
22 set of lock gates. The purpose of that is to prevent an oncoming
23 ship which is out of control for some reason from crashing the
24 gates. This cable is arranged that if a ship touches it it
25 will pay out and retard the forward motion of the ship and stop
26 it before it crashes through the gates. Now, we had an incident
27 like that on the Welland where a downbound ship coming through
28 a lock failed to stop. Now, I don't know yet what the circum-
29 stances were, but for some reason, either due to excessive speed
30 or wrong way engines or some other occurrence, the ship came too



1 far ahead and crashed into the fender boom. The boom was
2 destroyed, but the gates, which are much more valuable and
3 much more difficult to replace, were safe.

4 Now, this occurred shortly after five o'clock
5 in the afternoon or evening, and the locks were back in
6 service about three o'clock the next morning. Fortunately
7 in that case it happened in a set of twin locks, in other
8 words, two locks side by side, of which we have three on
9 the Welland, and we were able to maintain traffic to quite
10 a significant degree throughout the repairs. Of course, the
11 forward motion of the ship was retarded, but not entirely
12 stopped. So the fender boom is a most essential part of
13 our equipment, and I regard it as the length of the lock in
14 that it is the physical extent that it is possible to be
15 occupied by a ship and still have the large function it is
16 designed to do.

17 Q. Now, sir, you have quite ably described the
18 locks. Would you describe the approach to the locks and how
19 the vessels approach and enter the locks?

20 A. I might perhaps describe the approaches to
21 Montreal Harbour.

22 Q. If you please. That is at St. Lambert?

23 A. Yes.

24 Q. The locks which we see in Victoria Bridge,
25 I believe?

26 A. Yes. The ships through the harbour are under
27 the control of the Montreal Harbour Dispatcher, chiefly to
28 centralize control so that there is no possibility of two
29 entities attempting to direct the same vessel. So that the
30 directions received are clear and concise and are not complicat



1 with someone else. When the ship is ready to proceed into
2 the Seaway, they notify the Montreal dispatcher, who in turn
3 notifies our dispatcher by land telephone, and that dispatcher
4 --

5 Q. Excuse me, when you talk about the Montreal
6 dispatcher, do you talk about a pilot dispatcher in Montraal?

7 A. No, the dispatcher who arranges for the
8 movement of ships from one dock to another or permits him
9 to leave the Montreal harbour to go downbound up against the
10 upcoming traffic. It is arranged by that dispatcher so that
11 a large ocean liner has an unimpeded passage downbound.

12 Q. Would he be under the harbourmaster?

13 A. Yes, he is under the harbourmaster.

14 Q. And he lets your own dispatcher know what
15 traffic is bound for the St. Lambert dock?

16 A. Yes, he calls our dispatcher who is
17 stationed at the Beauharnois lock the fact that he is ready
18 to proceed. The Seaway dispatcher consults his chart showing
19 the number of ships that are already, let's us, say at
20 St. Lambert lock and the condition of traffic there, and he
21 reports to the Montreal dispatcher, very well, send your ship
22 on; or if there is any congestion there he will say:

23 "I will advise you when it is possible to leave," and that
24 dispatcher in turn informs the ship whether it is ready to
25 come at that time or not. If it is ready to come, he crosses
26 the harbour confines and enters the Seaway just before the
27 Jacques Cartier Bridge, and at that point he contacts the
28 dispatcher by radio telephone.

29 Q. This is by ship?

30 A. Yes, and the ship master contacts our dispatch



1 giving his name and vessel particulars, the dispatcher
2 would advise him to come forward on the lock lights, signal
3 lights, if he is going to go directly into the lock. If
4 he knows he is going to tie it into the wall, he tells him
5 at that time that he will have to tie it into the entrance
6 wall.

7 Q. If he ties it into the entrance wall, are
8 there any linesmen available to take care of his docking?

9 A. No, there are not.

10 Q. He has to provide that himself?

11 A. He has to provide that from his crew.

12 Having come in so far, he will be guided by the signal light
13 at the downstream end of the lock, which is normally solid
14 red, which indicates that he must not approach within a certain
15 distance of the structure, and if the structure is being
16 made ready for the ship's entry the light can be flashed to
17 indicate that the structure is being prepared for him, and
18 when the lock is ready, either by simply opening the gates
19 and the rest of the machinery to admit the upbound ship or
20 the emergence of the downbound ship, the light is turned to
21 green, which is the signal to the upbound ship to enter the
22 lock.

23 Q. You said that there was a fixed red light
24 that the ship could not approach or enter the lock beyond a
25 certain point?

26 A. Yes.

27 Q. And when the lock is made ready for the ship
28 the light becomes flashing?

29 A. Yes.

30 Q. Are there any delays, any set intervals of



1 time between the fixed red light and the flashing red light?

2 A. No. The flashing red light is used to
3 a much greater extent at the approaches than it is on the
4 locks proper. But the delay might be long or short.
5 The master is under the necessity of advancing only when the
6 light becomes green.

7 Q. Does he receive any warning that the light
8 is going to turn green, or does he have to standby at any
9 time?

10 A. He must limit his forward motion by the
11 light as he sees it at that time. If the light is red, he
12 must assume it is red and he must be prepared to tie up to
13 the wall.

14 Q. When he is tying up to the wall, the light
15 being red, does everyone go on that and say let's go?

16 A. The fact is that the ship's master and the
17 crew must be ready to move when the structure is ready for
18 them.

19

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1 Q, So they have to stand by?

2 A. They have to stand by, yes. Now, there
 3 are frequent occasions when ships are in tiers, that is one
 4 behind the other, and a ship ahead of him goes into the
 5 lock, and he is under a standing order to move up to what
 6 is called the end of the approach, the farthest point that
 7 they must go, and occupy the place of the ship ahead of
 8 him. Then they must be ready to cast off their lines and
 9 come in when the light is green.'

10 Now, it is not as difficult as it sounds,
 11 because in many, many cases the upbound ship occupies the
 12 lock on the emergence of an outbound ship. The traffic
 13 is heavy enough so that most of the times there is a
 14 downbound ship leaving the lock many, many times.

15 Assuming the light is green, and the master
 16 is proceeding into the lock, he has his crew set his
 17 mooring lines in the proper position for mooring. That
 18 is, they are drawn off their retaining winches, through
 19 the fairleads at the side of the ship, and must be
 20 drawn out on the ship's deck so that they must be ready
 21 to be taken up the lock walls without operating the
 22 winch itself. This is done to avoid accidents that might
 23 occur when the line becomes fouled in the winch, or the
 24 winch is improperly operated, or they find at the last
 25 moment that it doesn't operate, and it permits the
 26 mooring line to be physically ready to be drawn up to
 27 the top of the lock walls.

28 Q. Who handles these lines on the wall?

29 A. The seaway crew. Each lock is manned
 30 by a lockmaster and four linesmen and two operators, one



1 at each end of the lock, a total of seven men minimum.

2 The mooring lines are drawn up to the top of
3 the lock wall by the four linesmen, who throw hand lines
4 down from the lock wall to the ship's deck, and the crew
5 of the vessel make the light line fast to the steel lines,
6 and draw them up with car haulers, and normally proceed
7 with the ship as it enters at a slow walking speed, and
8 at the proper locations fix the lines on the mooring posts

9 Q. Who directs the movements of the ship
10 when she is entering or moving in the lock?

11 A. Well, the seaway considers that the
12 master is responsible for the control of his ship now.
13 If there is a pilot aboard, the pilot in many cases actually
14 cons the ship into the lock, governs its speed and
15 direction, and indicates the engine movements that would
16 control the ship, but the responsible party so far as the
17 seaway is concerned is always the master, and with that
18 small distinction that is the way it is.

19 Q. Would your lockmaster ever give orders
20 to the masters of vessels, or the pilots on board of them
21 as regards their movement of the vessel within the lock?

22 A. He would give the order to the bridge
23 of the ship, and if the master chooses to delegate that
24 responsibility to the pilot, then the pilot receives the
25 order, and he will probably tell him how far to proceed
26 into the lock.

27 This is particularly useful when there is a
28 double lockage, so that the first ship must move forward
29 a sufficient distance to allow the second ship to enter, or
30 it may be done with a very large ship to check her position



1 The lockmaster might also call for a check
2 through the master to the pilot, who would receive it in
3 many cases, indicating that the ship was at too great a s
4 and it would then be the responsibility of the
5 Authority linesmen first to throw the lines on the
6 mooring posts immediately.

7 Q. If your lockmaster would indicate to a
8 ship that she is proceeding too fast, there would be a
9 signal of some sort?

10 A. He would call "Check".

11 Q. And would your linesmen, upon hearing
12 the word "Check", without waiting for any other instruction,
13 throw the mooring lines on the bitts on the wall?

14 A. Yes, the time factor is quite important
15 there, and there is not much time for anything to be done
16 if it is going to effectively stop the ship. Now, at the
17 same time the captain or the pilot, as the case may be,
18 would ring for reverse engines and check the ship by her
19 engines, but the lines are put in a checking position,
20 so that the forward motion could be taken off the ship
21 to assist in taking it off the ship. It is possible
22 also for the captain to make the same request to the
23 lock crew, call for full check, or whistle for full check
24 and in that case the crew immediately throw the lines
25 on the posts.

26 Q. So, if I may sum up, you consider that
27 the master is responsible for the operation, or movement,
28 of the vessel, either upon entering or leaving the lock,
29 but your lockmasters would give directions to the master,
30 and then it is the master's responsibility to see that



1 these directions are carried out. Is that correct?

2 A. That is right.

3 Q Now, surely these masters, or pilots,
4 must be provided with instructions before they enter the
5 seaway. Do you check to see whether the masters are
6 familiar with the seaway procedure before admitting them?

7 A. We have a Masters' Handbook. It is
8 a joint publication, issued by the Seaway Authority and
9 the Development Corporation, and is exactly the same ---
10 it is the same book that is used on both sides of the
11 border, and the masters must have in their possession,
12 according to the regulations, a copy of that handbook.

13 Q. Would this copy be the handbook?

14 A. That would be it. May I see the date?
15 That is it.

16 Q Is this up to date?

17 A. Yes.

18

19 ---EXHIBIT NO. 470: St. Lawrence Seaway Masters
20 Handbook.

21 MR. LALONDE: My lord, could we have a French
22 copy of that handbook also filed?

23 THE CHAIRMAN: Yes. It will be filed under
24 Exhibit No. 470F.

25 Q. Do you ensure that masters are familiar
26 with the Seaway procedure before admitting them to the
27 Seaway? If so, how do you do it?

28 A. No, we don't. Admittedly, there is a
29 void there in the procedures, in that while the regulation
30



1 state that the master must be in possession of the Masters'
2 Handbook, and must be familiar with its contents, we do
3 not conduct any examining school to assure ourselves that
4 he is familiar with it.

5 Perhaps in this connection I might say that
6 that is a void that we very much desire that the pilots
7 would help us fill, in not only being thoroughly familiar
8 with the seaway regulations on which the shore-based
9 people are operating, and all the structures are operating
10 not only to be thoroughly familiar with it themselves, but
11 to take some steps, inquiries, or whatever is proper, to
12 see that the master not only has the book, but has a
13 working knowledge of its contents. The pilots are con-
14 tinuously traversing the system, and this, I think, is
15 one avenue that the pilots could be of enormous assistance
16 to us in our shore-based efforts to provide steady, uninter-
17 rupted, navigation.

18 Our own Seaway inspectors inspect the ship
19 on its initial approach to see that its fittings are
20 proper, that is the fittings pertaining to the mooring
21 chiefly, and the commanding of men, but the next time the
22 ship comes in it may be with a different master, and we
23 don't have personnel that examine the ship the second
24 time.

25 Q. You have described the operation of
26 entering a lock. How many ships can you accommodate in a
27 single lock?

28 A. Well, at the large ones, the 730 foot
29 long ones, we can only take one of course. The canallers
30 the 260 footers, or some larger than that, we can take two.



1 Q. And the deep sea ships?

2 A. Many of them are around the five or six
3 hundred foot mark, and they would be one. Some of them
4 that aren't greatly larger than the 260 foot canallers
5 would be a double lock.

6 Q. What would be the least depth available
7 in the portion of the Seaway between Montreal and Kingston?

8 A. We have 27 foot controlling depth in that
9 area for which the seaway is responsible, and the system
10 from Montreal to Lake Ontario was designed for a 27-foot
11 controlling depth.

12 Q. What would be the maximum draught that
13 you would allow through it?

14 A. We have recently increased the draught
15 from 25 feet to 25 feet 6 inches, which is the maximum
16 allowable draught. We do not intimate at all that owners,
17 or masters, should necessarily load to that limit, but we
18 do insist that they don't exceed it. As a matter of fact,
19 if they present themselves with excessive draught, we
20 see that they discharge water ballast, or trim ship, or
21 even in extreme cases discharge cargo until they are
22 within the draught limits of 25 feet 6 inches.

23 Q. Now, what would be the procedure followed
24 by a ship leaving the lock?

25 A. Well, we will assume that at this time
26 this outbound ship has entered the lock. and is tied
27 up. She is secured on her lines. The lines are taut.

28 If I might just take a moment, the fender
29 boom is closed behind it to protect the gates in case the
30 wrong way signal might be given to the engine room, and



1 the ship goes astern instead of ahead, which happens
2 occasionally. We get one or two a year, and maybe more ---

3 Q. So, when the ship is inside the lock,
4 and both gates are closed, there is a fender boom forward
5 and one aft?

6 A. Not all the locks have fender booms for-
7 ward, because in some cases, particularly on the Welland,
8 the concrete breast wall, which is under the upper lock,
9 is of sufficient height to retard the forward motion of
10 a ship if it did go out of control, but many of them have
11 the ones with a low breast. The St. Lambert one is one
12 of those. The fenders drop behind the ships. The lower
13 valves are closed, and the upper valves are opened, and
14 the water is allowed to come into the lock and raise the
15 ship to the higher level. During that period the ship's
16 crew must attend their winches, and keep their lines
17 taut, because there is a possibility of a forward or
18 stern motion being applied to the ship by the entrance
19 of the water, and it is essential that the lines are
20 carefully tended during this period.

21 Q. Who oversees the operation of keeping
22 the lines taut when there is no pilot aboard?

23 A. Well, the master of the ship would be
24 responsible for the conduct of his ship and crew, whether,
25 I think, the pilot is aboard or not.

26 This again is something the pilots could help
27 us in our selfish desire, I presume, to make the whole
28 thing work well. If they are aboard the ship, and find
29 the particular captain is a little lax in his line tending,
30 they might stay right with the ship and say "Tend those



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1 lines properly". The individual master, if he knows that
2 the lines are slack, he can call for the crew to tighten
3 the lines.

4 Q. Has that happened?

5 A. Oh, yes. It happens.

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Q. We have this ship inside and she is rising
(English) with the flow of water; how long does it take to bring the
ship up to the next level before opening the gates?

A. The raising of the lock itself is of the
order of six minutes. If it is a fairly shallow lock, it may
be as much as eight. In some of the deeper locks, having
raised the lock in this six minute period, then the valves
of the gates are opened. At St. Lambert lock, you may recall
that there are alternate bridges there. The traffic from the
city, the automobile traffic and the train traffic must
both be diverted, in this case from the upper to the lower
bridge coming in front of the vessel around to the stern of
the vessel and this has to be arranged through the C.N.R.
dispatcher, who is in St. Lambert. Eleven minutes -- approx-
imately eight to eleven minutes before we are prepared to
switch the traffic from the upper bridge to the lower bridge,
or the lower bridge to the upper bridge, we notify the
C.N.R. dispatcher that we are about to do so, or request
to do so and the C.N.R. dispatcher is in control of the switch
that locks the bridge. At that time, if he has no train on
the block that is close to the canal, or nothing approaching
that cannot be halted, he will advise our operator at the
lock structure that it is okay -- "The bridge will be ready for
you". When he is quite ready for it, the eleven minutes has
gone. He calls him and gets the bridge, which is indicated
by a signal light on his desk . . .

Q. That is your dispatcher has a signal light
on his deck?

A. That is our operator at the lock itself.

Q. So he has a light which indicates to him



1 whether there is safe passage or not, as regards the bridge?

2 A. That is correct -- whether he can, in this
3 case, open the upper bridge. In the meantime, the lower
4 bridge has been closed and lowered behind the ship and trains
5 and automobiles are crossing, not the upper bridge
6 as it was when the ship came in, but the lower bridge. Now
7 then, he cannot open the upper bridge. He cannot lift it
8 until he gets clearance from the C.N.R.

9 Q. So your lock operator looks after the
10 lifting and the lowering of the bridge?

11 A. That is correct.

12 Q. Yes. Please continue.

13 A. Having raised the bridge and opened the
14 upper gate, the protective fendering devices, the fender
15 booms are raised and the ship's lines are cast off. The
16 signal there is a red light on the fender boom which turns
17 to white and normally the master or the pilot will signal
18 for his lines to be cast off and within normally a few
19 seconds -- and they watch it very closely -- and in that
20 case the linesmen onshore on the locks will cast the lines
21 off the bollards and the ship is free to proceed and she
22 proceeds on her wheel.

23 Q. At the end -- at the exit of the lock,
24 as it were, is there also a wall such as you have mentioned
25 at the entrance of the lock?

26 A. Yes. There would be the upper tie-up wall
27 and usually there is a vessel tied therewaiting to come in.
28 That is waiting to occupy the lock in a downbound direction
29 when the upbound ship leaves.

30 Q. What would be the length of those tie-up wall?



1 A. Well, they vary.

2 Q. Well, at St. Lambert?

3 A. The lower St. Lambert is about twenty-one
4 hundred feet, if I remember correctly; the upper one not that
5 long at that location. The length of these tie-up walls
6 are designed somewhat on the probability of a great number of
7 ships coming to them, or greater than one lockage coming to
8 them, which is the case on the upbound side of the lock,
9 because once the ship has committed itself to leave Montreal
10 here, there is no place for it to go to be secured, except
11 at the lower entrance wall. So in case there is some accident
12 to the structure itself or some navigational incident that
13 would cause a delay of even a fraction of an hour, it would
14 be necessary for more ships to tie up at the wall than were
15 actually intended in the first place; but this is not so
16 likely to happen in the downbound direction because they are
17 being dispatched from a lock at Cote Ste. Catherine's, which
18 operates in a very similar fashion to St. Lambert and at
19 much the same speed. So that we are not likely to get
20 congestion on that side.

21 Q. Now, this procedure of entering and leaving
22 the lock, the locking procedure which you have described, would
23 it apply also to all your other locks? Would there be major
24 differences?

25 A. No. It is the same basic procedure. There
26 are individual differences at the locks. Some have bridge and
27 some don't; some have high lifts and some low. But, essentially
28 it is that principle.

29 Q. Do you maintain any tugs in or near your
30 locks for accidents?



1 A. Breakdowns. We have two small tugs that
2 are used for incidental chores -- shall I say moving equip-
3 ment, moving our own equipment in connection with repairs
4 and maintenance. We have no tugs of sufficient capacity to
5 assist a large ship effectively.

6 Q. If you do have to assist one, what would y
7 do?

8 A. A commercial tugging firm would be called.
9 If it was necessary with windage or a ship is in cross winds
10 inthe canal, or in difficulty, we would call a commercial
11 tugging firm. Normally, at the request of the master, if a
12 master, for some reason or other, was loathe to procure a
13 tug, as our officers at the site thought he should, then
14 we would procure a tug, if necessary; but that is extremely
15 rare and the matter of tugging systems is arranged with the
16 master.

17 Q. But would you, in some cases, require that
18 a ship take a tug and refuse passage if the ship did not?

19 A. Normally not. We might have, in a case
20 where a hulk from which the propellant machinery and the
21 controlling machinery had been removed, where she was a dead
22 ship, if she were attempting to move with very small, inadeq
23 propulsion units, which we considered inadequate, we would
24 insist that she have tug assistance, or further tug assistance
25 if the original amount that she had provided was, in our
26 opinion, inadequate.

27 Q. This is not what I had in mind, though.
28 Let us take a deep-sea ship, say a light ship or a ship which
29 has a reputation of steering badly, and whatnot, would you
30 request that this ship take a tug before you let her through?



1 A. I think to answer that I should say that
2 we would not consider the use of tugs, under those conditions
3 as a normal possibility, and, at the same time, maintain
4 the amount of traffic that is offered. We would not be able
5 to have a port tug to handle a ship into the lock and a
6 stern tug to control her and prevent her crashing into the
7 deck head. It is simply not feasible to do that without
8 delaying the other traffic. We would rather move in this
9 fashion, that if when the pilot that brings the ship to the
10 lock considers that the condition of the ship is dangerous,
11 either by reason of her propulsion machinery, her steering,
12 or the fact that she is inadequately ballast, too light and
13 carrying too much windage, that the pilot should, in his
14 wisdom, decline to take the ship and persuade, shall we say,
15 the master to stay at his moorings in the harbour, rather
16 than attempt to come in under a high or an adverse wind
17 condition where he couldn't properly advance. There is too
18 much congestion to use tugs.

19 Q. Has it happened that you have refused to
20 let a ship come through, for some reason or other?

21 A. We have stopped ships for examination of the
22 equipment, their steering, their engines, the possibility of
23 an engine refusing to start or a malfunction of the engines.
24 A ship that is damaged can be halted and repaired or off-load
25 or patched or repaired. We have, on many occasions, talked with
26 the master of the ship and with the pilots, through the master
27 -- sometimes directly to the pilot, on account of the master's
28 wish to have the pilots speak for him, through our dispatchers
29 and advise him of the windage at the lock which he is about
30 to approach, and its direction and if the officer in charge of



1 our site considers that it is unsafe for this ship to proceed
2 he will persuade, or attempt to persuade, the captain to stop
3 where he is. It is quite within our province to refuse to
4 accept him and say "You stay there 'til the wind abates" --
5 or whatever.

6 I do not think I am quite answering your question
7 but I am afraid I do not understand what you have in mind.

8 Q. You have said that if you are not satisfied
9 with the state of the wind or not satisfied the ship can
10 safely proceed through the locks, through faulty engines or
11 through faulty arrangement of ballast, that you can refuse
12 to take her through?

13 A. That is correct.

14 Q. And let her wait until such time as she
15 has completed the necessary repairs or arrangements?

16 A. That is correct.

17 Q. That is what I wanted. Now, you are
18 responsible for the upkeep and maintenance of all these
19 locks?

20 A. That is correct.

21 Q. Are you responsible for the upkeep and maintenance
22 of the channeling between the locks?

23 A. It depends on the location of the channel.
24 The south shore canal, which is an enclosed channel, it really
25 a canal channel. We are responsible for that. We are not
26 responsible for the maintenance of the channels across the
27 open lake areas, Lake St. Louis and Lake St. Francis and
28 Lake St. Lawrence and in the river section above Iroquois.

29 Q. Would you be able to supply the Commission
30 with a plan of the Seaway showing the areas for which you



1 are responsible?

2 A. Yes. I haven't anything with me but I
3 would have to mark it up so that it would be properly . . .

4 Q. Yes. I am sure my friends will have no
5 objection if we are supplied with a plan by the Seaway
6 Authority showing the areas for which you are responsible.
7 It would be easier to understand all this afterwards?

8 A. Yes.

9 THE CHAIRMAN: You can give it a number right
10 now.

11 MR. JACQUES: What number, Mr. Chairman?

12 THE CHAIRMAN: It will be Exhibit No. 471.

13 Q. Now, in the areas for which you are responsible,
14 do you maintain any aids to navigation?

15 A. Practically none, sir. We have a few
16 markers buoys that we might put in in the case of some
17 obstruction in the channel, or some unusual condition that
18 would be of a temporary nature; but essentially the buoys
19 are handled by the Department of Transport personnel.

20 Q. And the lighthouses too and range lights
21 if any?

22 A. We have no . . .

23 Q. These would be maintained by the Department
24 of Transport?

25 A. That is correct.

26 Q. Do you control the speed of vessels through
27 those areas?

28 A. Yes. It is essential that we do, to prevent
29 orderly arrival at the locks. I have described the procedure
30 at a specific lock. The same thing is going ahead at the



1 time at the next adjoining locks and it is extremely desirable,
2 for efficient operation, for the two ships leaving upbound
3 from the lower lock and downbound from the upper lock, to
4 travel at, as nearly as possible, the same speed so that they
5 will arrive at the next lock at the proper time, so that they
6 may be there when the third ship is raised and ready to vacate
7 the lock and, if possible, they are ready to enter. If they
8 go too quickly, they have to tie up, where they otherwise
9 would not and there are cases where -- for instance, at the
10 Beauharnois -- where it would be difficult for a ship to
11 tie up if the approach walls were fouled. Now, this could
12 occur by reason of some power failure at the lock structure,
13 some accident or incident of any kind that would delay the
14 process of pushing that ship downbound -- the ship ahead of
15 it downbound -- so that this ship which had left its upper
16 anchor some miles away from Beauharnois locks might not have
17 a wall to tie to when it arrives if it came too quickly.
18 On the other hand, if it goes too slowly you may find -- we
19 do find that the locks are ready to receive it and there is
20 no vessel there. Now, the traffic is of such an order that
21 we cannot afford to leave the locks idle. The locks act very
22 much as a pump and the amount of water you supply by a pump
23 depends on the number of strokes you make and if you miss a
24 stroke, you never gain it again. So, the period of about 45
25 minutes for the passage of the ship is lost and you do not
26 recover it and it is for that reason that we insist that the
27 ships travel as nearly uniformly as possible, so that we can
28 get an orderly delivery of ships through our system.

29 Q. Apart from this consideration, do you consider
30 the control of the speed of ships from the point of view of



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1 safety to shore installations?

2 A. That is a factor as well, The canal
3 banks can be heavily eroded by speeding ships in confined
4 waters.

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1 We are perhaps more interested in safety to navigation in
2 the system. Now, frankly, it doesn't make any difference
3 to us whether the ship is in trouble in one of our canal
4 entrances or whether it is in trouble in some other part
5 of the system. If it is in trouble and blocks the passage,
6 then the whole system comes to a stop. To that extent
7 we are very much interested in speed, and in the confined
8 channels we are most anxious that a steady, uniform and
9 safe speed is maintained, a speed that will provide the
10 greatest number of passages of ships in 24 hours that can
11 possibly be managed. It really doesn't matter too much
12 whether one individual ship arrives at its destination
13 half an hour earlier or an hour earlier if the other very
14 considerable number of ships which are attempting to make
15 the passage in the opposite direction or same direction
16 are impeded. Experience has shown that an orderly,
17 consistent speed, everybody in step, so to speak, and all
18 doing the same thing at the same time, is conducive to
19 the greatest output of the system than one who wants to
20 go at six or seven miles an hour and another one that
21 wants to at three or four miles an hour.

22 Q. Yes, but the idea of the set speed
23 of so many knots, is the primary consideration given to
24 the efficient operation of the canal, of the Seaway,
25 that is trying to put as many ships through in one day
26 as possible, or is the primary consideration given to
27 safety, either to ship or shore installation in fixing
28 a certain speed? Which is the guiding principle?

29 A. I think they are both studied very care-
30 fully and considered very carefully before deciding on the



1 speed. Our speed in the Beauharnois Canal is nine miles
2 an hour over the bottom, which was chosen on account of
3 the current in the Beauharnois Canal, the rest of the
4 system being seven miles an hour. A downbound ship in the
5 Beauharnois Canal could not maintain a proper speed with
6 respect to the current at, say, seven miles an hour under
7 normal conditions, so it was made two miles an hour greater
8 for that region. But in the narrow channels excessive
9 speed is not conducive to safety.

10 If I might speak of Welland Canal, where
11 the bottom width is 192 feet, a steady speed is
12 essential in the passage of ships, if they happen to meet.
13 The same applies in the channels in this area; 225 feet, I
14 think, is the narrowest, up to 620 feet, depending on the
15 location and, I presume, the amount of money which was
16 available at the time and also the necessity for speed and
17 ease of manoeuvrability.

18 Q. How was the figure arrived at?

19 A. If I might go back to the canal
20 services days when ships were operated through the Welland
21 Canal essentially as it stands now from 1932, speeds of
22 six miles an hour for the large upper lakers and eight
23 miles an hour for the smaller ones --- and traffic has
24 increased and it has nearly doubled since 1932, not in
25 the number of ships, but in the size of ships --- it was
26 found necessary then to make the speeds all the same in
27 the Welland Canal, and six and eight has proved success-
28 ful, and the number of accidents is negligible, and the
29 six miles an hour was chosen as a safe and proper speed.
30 Now, the various captains, it was discussed with them, and



1 it was considered to be a right and proper speed, and that
2 is why it was chosen.

3 Q. Now, you mentioned discussions with
4 captains. To the best of your knowledge, were the pilots
5 ever consulted by the Authority as regards installation
6 or movement control of vessels within the Seaway?

7 A. I don't know that we had ever instigated
8 a discussion with the pilots. I remember one incident ---
9 I am not sure whether it was last year or the year before ---
10 that one of the pilots in the Welland area wrote and
11 suggested that they might come and discuss our mutual
12 problems, and we replied and said we would be delighted,
13 and they came. We have not discussed it as a body with
14 the pilots. This is something we would welcome. We have
15 so many common problems that we would be delighted to
16 discuss it with the pilots any time. I think through the
17 probable good services of the D.O.T., who administer the
18 pilots, if it could be brought, we would be pleased.

19 Q. Has any attempt ever been made to
20 obtain the views of pilots on navigational matters and
21 problems in the Seaway, apart from this instance in the
22 Welland Canal?

23 A. I have discussed this matter of handling
24 the ships at any time when we are on board a ship, which
25 we occasionally do, to view our installations from the
26 ship's side, and in any case where a pilot is on board a
27 particular ship his views are sought and welcomed, and we
28 are very pleased to have them. We occasionally have had
29 the opportunity of speaking to them at the lock walls,
30 we might visit them at the same time they are there, but



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1 to my knowledge they are not organized. This is something
2 that we could have improved. We would benefit by their
3 advice, I am satisfied.

4 THE CHAIRMAN: Mr. Jacques, before you change
5 the subject, we will adjourn for a few minutes.

6 MR. JACQUES: With pleasure, my lord.

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9 ---Short recess.

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1 MR. JACQUES: I have been supplied with a plan
2 which has been filed as Exhibit No. 471.

3 THE CHAIRMAN: Do we understand that you are
4 finished with the evidence of Mr. Burnside?

5 MR. JACQUES: No, sir. We interrupted the
6 evidence of Mr. Burnside to fit this witness in.

7
8 ---EXHIBIT NO. 471: Plan issued by the Seaway
9 Authority.

10 FREDERICK DOUGLAS SCANTLEBURY,
11 sworn:

12 DIRECT EXAMINATION BY MR. JACQUES:

13
14 Q. Would you state your full name, please,
15 and age?

16 A. Frederick Douglas Scantlebury,
17 Assistant Shipping Master, Department of Transport.

18 Q. How old are you?

19 A. Forty.

20 Q. How long have you been Assistant
21 Shipping Master?

22 A. Seventeen years.

23 Q. Will you tell the Commission the pro-
24 cedure which is followed by your office as regards notices
25 to mariners, and their distribution to shipmasters?

26 A. We receive two types of notices, the
27 British from the U.K., and the Canadian one from D.O.T.,
28 every week. They are usually given out on request of
29 masters, or agents, or interested people.
30



1 Q. And you put them in the articles of
2 British ships?

3 A. That is right.

4 Q. Would you explain what you mean by
5 articles?

6 A. The agreement between the master of the
7 crew of a British or Canadian registered ship.

8 Q. This is a document in the form of a
9 copybook, is it not?

10 A. Yes. It is a legal document. It is
11 the contract entered into between the crew and the master.

12 Q. But it looks like a large copybook?

13 A. I wouldn't say a large copybook. It
14 is a printed form issued by the Government, and in
15 which the men's names are inscribed, along with their
16 particulars.

17 Q. And it includes several sheets of paper?

18 A. Yes.

19 Q. Which are bound together?

20 A. That is right.

21 Q. And you include the notices to mariners?
22 You insert these notices for the master?

23 A. Yes.

24 Q. Have you brought examples of the notices
25 which you supply to masters?

26 A. Yes, I have. I have two here, a
27 Canadian one and a British one.

28 MR. JACQUES: Might we file these in a bundle
29 as an example of what are notices to mariners?

30 THE CHAIRMAN: Yes, they will be Exhibit 472.



1
2 ---EXHIBIT NO. 472:

Department of Transport
Notices to Mariners, and
Admiralty Notices to
Mariners.

3
4
5 MR. JACQUES: I don't know whether there are
6 French editions of these.

7 MR. LALONDE: And I won't dare ask him for them.

8 THE CHAIRMAN: They are printed in Ottawa, are
9 they? Would you inquire, Mr Counsel, whether there is a
10 French version?

11 MR. JACQUES: Very well, my lord.

12 Q. Are you familiar with these notices?

13 A. In their distribution, yes.

14 Q. They seem to be weekly editions of notices?

15 A. That is right.

16 Q. Do you receive and distribute a document
17 which is entitled "Notice to Shipping"? This document is
18 put out by the District Marine Agents of various Districts?

19 A. No. We don't receive that document.

20 Q. Do you receive a copy of the messages
21 which are broadcast over various stations concerning aids
22 to navigation, and their failure?

23 A. We do not. The only document we receive
24 is the signal service bulletin, which quite often has
25 notations on the top of it calling the attention of masters
26 and pilots to various things.

27 Q. And this signal service bulletin, do you
28 distribute it to shipmasters?

29 A. No, we have one on file only.
30



1 Q. So the only information which you would
2 make available to shipmasters would be that contained in
3 these two notices, filed as Exhibit No. 472?

4 A. Yes.

5

6 CROSS-EXAMINED BY MR. LALONDE:

7

8 Q. Are these notices printed in Ottawa or
9 Montreal?

10 A. One is printed in Ottawa, and the other
11 is printed in the United Kingdom.

12 Q. I understand you distribute the
13 British one to masters here too. Is that it?

14 A. Yes, we do.

15 Q. And the British one concerns only
16 pilotage in British waters. Is that it?

17 A. No, all over the world.

18 Q. This weekly edition which you distribute
19 here, the number is 457480, which you have filed as
20 an exhibit, it is sent over to you from Ottawa?

21 A. That is right.

22 Q. Does this mean that when a District Marine
23 Agent would send a report about change in navigation aids,
24 his report would be sent by mail to Ottawa, then inserted
25 in this weekly edition?

26 A. It would be incorporated in it.

27 Q. And then sent over to you?

28 A. That is right.

29 Q. And then you distribute it in Montreal?

30 A. That is right



1 Q. How is the distribution of this notice
2 organized?

3 A. It is sent out by the Hydrographic
4 Service in Ottawa. As far as our office is concerned,
5 anyone who asks for it, we give it to them. We supply it
6 to the agents on request, or to masters when they come
7 into the office.

8 Q. Do you have an automatic distribution
9 list?

10 A. No. That is done, I believe, by the
11 Hydrographic Service in Ottawa.

12 Q. Do you distribute a large number of
13 these in Montreal?

14 A. Oh, around about maybe twenty, twenty-
15 five a week.

16 Q. Are they mainly distributed to ship
17 agents, or to masters aboard ships?

18 A. Approximately 50-50. Some to agents,
19 and some to masters.

20 Q. Do you send it by mail to these people,
21 or do they come to collect it?

22 A. No. We hand it out personally when
23 they come.

24 Q. Do they come around every week to pick
25 them up, or do you have a few piling up?

26 A. They pile up. I understand most of the
27 companies are on the mailing list directly from Ottawa.

28 These are extra copies for ships not
29 on the mailing list.

30 Q. The one you have filed as part of



1 Exhibit No. 472 is a pretty substantial one comparative to
2 the general notice to mariners, is it not?

3 A. No. They are all about the same. That
4 is the 21st June week. There is one each Friday.

5 Q. Do you have also a notice to mariners,
6 published on small single sheets?

7 A. No, that was a couple of years ago.
8 They are now incorporated in these weekly editions. They
9 used to be individual sheets.

10 Q. There are no more of these individual
11 sheets now?

12 A We don't receive individual sheets.

13
14 CROSS-EXAMINATION BY MR. LANGLOIS:

15
16 Q. In order to make the record quite clear,
17 these notices to mariners that you have filed as Exhibit
18 No. 472, I refer to those issued by the Department of
19 Transport in Ottawa, cover the whole of Canada. Is that
20 correct?

21 A. That is right, sir.

22 Q You have no separate notices to
23 mariners in this booklet form for the Atlantic coast and
24 one for the Pacific coast?

25 A. No, it is a complete coverage.

26 Q. Including all the inland waters of
27 Canada?

28 A. Any alterations in navigation aids.

29 Q. Now, again to make the record quite
30 clear, in these notices to mariners you have only permanent



1 alterations, or changes in the aids to navigation?

2 A. I couldn't answer that, truthfully.
3 That is what has been published for the general public.
4 Now, whether or not they are temporary changes I am not
5 quite sure. They could be temporary and they could be
6 permanent.

7 Q. Is it not a fact that permanent changes,
8 alterations, are contained in notices to mariners, while
9 those of a temporary character are put out in notices to
10 shipping?

11 A. That is not in my line, sir.

12

13 CROSS-EXAMINATION BY MR. BRISSET:

14

15 Q. Are you aware, sir, that masters of
16 foreign ships can also obtain these notices to mariners
17 from the consular office of their country?

18 A. Yes. If they are on the mailing list
19 it is quite true they get them direct from Hydrographic
20 Service in Ottawa, the same as most agents.

21 Q. And masters of foreign ships can get
22 them from their consulate also?

23 A. Yes, and also from the customs.

24 Q. When you speak of the masters of British
25 ships who are given these notices to mariners automatically,
26 they being inserted in the articles of agreement, do you
27 include Canadian ships in the word British?

28 A. Yes, quite often.

29

30



DIRECT EXAMINATION BY MR. JACQUES, (Continued):

Q. I show you Exhibit No. 471, which you handed me during the recess. Could you explain to the Commission what is shown on this plan, please, starting east at St. Lambert?

A. This is a plan of the area from Montreal Harbour to Lake Ontario, and shows, in red the portion under the control of the St. Lawrence Seaway Authority, being the south shore of the Beauharnois Canal and the Iroquois Canal.

Q. Would the Soulanges Canal, indicated in area number 2, come under your jurisdiction also?

A. The Soulanges Canal is not in service. It went out of service when the Seaway started, and is an old, disused canal, shown on the same plan, but it is inoperative.

Q. You have already shown the east and west limits of your jurisdiction. Would you show in red also the north and south limits, please?

---(The witness complies.)

Q. This then does not include Welland Canal?

A. No, the Welland Canal is some miles away, at the opposite end of Lake Ontario.

Q. And this then also shows a bird's-eye view



1 of the various locks and canals?

2 A. There are inserts showing the lock
3 structures.

4 Q. To come back to the matter of speed, sir,
5 would you tell me whether the speed of seven knots ---

6 A. Seven miles per hour.

7 Q. Seven knots, or seven nautical miles ---

8 A. Seven miles per hour. Those are land
9 miles.

10 Q. Seven land miles per hour was chosen,
11 having first regard to the safety of traffic and safety of
12 shore installations, then traffic adjusted according to
13 that speed?

14 A. Essentially that is correct. The safety
15 of the bridges is quite intimately tied in with the speed
16 of the approaching ship. If the speed is too great, the
17 structure, for safety reasons, would have to begin to
18 move along to clear the ship at a distance that would
19 cause disruption to the land traffic crossing the bridge,
20 and the seven miles per hour is a reasonable speed with
21 respect to the land-based traffic, as well as the safety
22 of the ship and the structures.

23

24

25

26

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30



AG/RPS 1 Q. Now sir, to come back to dispatching, how
EE3 2 many dispatching stations would you have?
3 A. We have three.
4 Q. Where are they situated?
5 A. One at Beauharnois, one at Iroquois, and
6 one on the Welland. The Development Corporation in the
7 United States section have a station at Eisenhower Lock.
8 Q. You said that these stations did dispatching
9 which covers areas outside of your, say, territorial jur-
10 isdiction. Is that correct?
11 A. Yes, that is correct, outside the areas
12 that we actually maintain. Yes.
13 Q. Would you explain to us how that dispatching
14 is done?
15 A. Perhaps I might just refer --
16 Q. You may use an example if you wish?
17 A. I might refer briefly to the necessity
18 of having a safe anchorage between the lock structure, or
19 the structure towards which the ship is travelling, and the
20 calling in point from which the vessel first contacts the
21 dispatch station, because if there is difficulty at that
22 structure, or in the intervening waters it is necessary to
23 advise the vessel that she must go to anchor in the anchorage
24 to which she is about to arrive, if she passes the anchorage,
25 then there is no safe place to put her, and she is under the
26 necessity of going down where she can.
27 Q. Would these anchorages be indicated on Exhib
28 No. 471, or could they be indicated on that plan?
29 A. I am not sure whether they are or not.
30



F/PE/RP3

English 2

Q. Would you indicate them in blue on Exhibit

471. Indicate it by the letter X, that is in Lake St.

3 Louis, western portion, at the entrance of Beauharnois . . .

4 A. No. It is at the Beauharnois Canal. The
5 arrow is pointing to Beauharnois Canal.

6 Q. I see. And the next anchorage is at
7 Iroquois Lock?

8 A. This is the dispatching station at Iroquois
9 lock.

10 Q. Is that also an anchorage?

11 A. No.

12 Q. You are indicating a dispatching station?

13 A. Yes.

14 Q. Very well. And the American dispatching
15 station is shown at Eisenhower Lock. Would you indicate the
16 American section of this Seaway in blue, please?

17 A. May I just, for a moment -- I think that
18 I have a plan that might show the dispatching station and the
19 areas to better advantage, perhaps, than that, including the
20 anchorage areas, which is a different plan, which I would
21 be pleased to make available to you.

22 Q. Would you make it available tomorrow morning?

23 A. Yes.

24 MR. JACQUES: With your lordship's permission,
25 I would desist from examining on this subject until tomorrow
26 morning when the plan is available.

27 Q. Have you prepared, at my request, a statement
28 on accidents to locks and other installations in the Seaway
29 since its opening, giving the date, nature, probable cause and
30



1 estimated amount of damages?

2 A. Yes, I have.

3 (Produces.)

4 Q. Thank you. Do you only have one copy?

5 A. I have a second here with me. This I
6 might wish to keep.

7 Q. Would you explain the contents of this
8 document?

9 THE CHAIRMAN: You are filing that?

10 MR. JACQUES: Yes, as Exhibit No. 473.

11

12 ---EXHIBIT NO. 473:

Statement of accidents to
locks and other installations
in the Seaway, giving the
date, nature, probable cause
and estimated amount of damages.

15

16 THE WITNESS: This brochure includes the accid-
17 ents of the eastern, central and western regions; the east-
18 ern and central being an area from Montreal to Iroquois and
19 the western being the Welland Canal section, and it shows the
20 date, the vessels involved, the estimated amount of damage
21 and the nature and cause of accidents as indicated by our
22 reports. I should point out that in many cases the cause
23 is not shown because it is, perhaps, difficult to determine
24 and does not show as a precise cause in our reports. There
25 might be a difference of opinion as to what the cause had
26 been, for instance. But this is an excerpt from the report
27 of each incident, or each accident.

28 Q. Who makes these reports and to whom?

29 A. These reports are made in the Districts
30 where the accident occurs. It includes a report, if it is at



1 a lock, a report from the master to his canal superintendent
2 and from the canal superintendent to the District office,
3 from the District office to the Cornwall office, where it is
4 condensed.

5 Q. Now, would these reports also include
6 reports prepared by pilots, if pilots are involved in any
7 of these casualties?

8 A. No. I should not say "no", because in
9 a certain number of cases the pilots do append a report to the
10 main report. Some of the reports are signed by the master
11 and by the pilot as well. This is particularly true of the
12 foreign ships, where the masters have some difficulty on the
13 technical terms and they are not so familiar with the
14 Districts and the report is combined.

15 Q. Now, would you make any investigation into
16 any casualty?

17 A. Well, each incident is investigated,
18 firstly by the man in charge of the structure, be it a bridge
19 or a lock and, secondly, if it is of any serious nature at
20 all, by the canal superintendent of that specific area. He
21 would attempt to determine the cause, to his own satisfaction,
22 and determine what the remedial measures are required at
23 the moment and see that interested parties, for instance
24 approaching vessels, were made aware of the situation and
25 his head office would be advised so that if it were
26 of some hours' duration, they might proceed to make provision
27 for calling out the repair crews and things of that nature,
28 as well as setting up feasible steps to prevent a recurrence.

29 Q. When you carry out those investigations,
30 do you follow a set procedure or is it something



1 which is done, more or less, in a haphazard way?

2 A. Well, our reports are prepared on fairly
3 standard forms that lead to the collection of data that has
4 proven desirable, in accidents, over the past years; and,
5 as a result, has evolved, throughout the years and normally
6 leads to information that you are likely to require and
7 tends to explore the possibilities, more or less, in the
8 first report that was made. Then it is investigated as
9 completely as considered desirable.

10 Q. When you carry out your investigations,
11 do you call, say, the pilot before you or anyone else, for
12 that matter, and ask him questions on the casualty?

13 A. No. The first investigating officer --
14 let us say it is a ship and we are assuming that a ship is
15 involved . . .

16 Q. Let us take a deep-sea ship.

17 A. A deep-sea ship is at a certain station
18 and has had an accident. Perhaps it has damaged our works
19 of some kind or other. It hasn't stopped the ship. Actually,
20 it is proceeding to the next structure. If that vessel is
21 underway and the accident is of a minor nature, he proceeds.
22 If it is a little more serious and he can be tied
23 at the exit walls safely and properly, then he is halted for the
24 Lock Master and the canal superintendent to board the ship
25 and discuss the matter with the captain, the pilot again
26 carrying out the principle that the master is in charge and
27 responsible for his ship and in all investigations it is the
28 master who is the prime person investigated. The pilots,
29 as necessary, to bring out the captain's report, but essentially

30



1 it is the master who is responsible, under our present
2 situation.

3 Q. Under your present system?

4 A. Yes. If the ship has gone passed, it is
5 stopped at the next structure, if it is serious enough, and
6 and it is boarded by the investigating person, whoever that
7 may be -- frequently, the canal superintendent.

8 Q. Has the Seaway Authority ever been requested
9 to appear before an inquiry carried out by the Minister of
10 Transport of the officers of the Department of Transport to
11 do with shipping casualties?

12 A. Not to my knowledge. We wouldn't be
13 called if it were outside our District and if it were inside
14 our District, we would handle to ourselves.

15 Q. Going through the document filed, Exhibit
16 473, I notice that opposite the name of the vessel, in the
17 column for estimated amount of damages, there is sometimes
18 nothing. What does that mean?

19 A. That may mean that the physical damage
20 was of a minor nature and perhaps would not be **repaired** as a
21 PE/ss unit, or it might be that the accident was of such a nature
22 that it was very difficult to determine at that time
23 the cause.

24 THE CHAIRMAN: The damages there are only
25 damages to the Seaway property?

26 THE WITNESS: That is correct.

27 THE CHAIRMAN: Not to the ship?

28 THE WITNESS: No. The ship damages are not
29 included here. There may be cases in there where there is
30 no damage to our structure at all and, yet, it would be



1 a very serious accident, potentially, to us. It might be
2 a very close miss and something that we would be most anxious
3 to avoid having occur again; but it might not actually
4 cost anything, as far as we are concerned, but it might
5 be most serious for us, potentially.

6 Q. Potentially?

7 A. Yes.

8 Q. So it serves as a warning that your system
9 or the ship handling can be improved in some way?

10 A. Yes, that is correct.

11 Q. Now, have you prepared a statement of
12 the overall cost of your major installations, including
13 canals, locks and navigational aids?

14 A. I have, with the exception that the
15 navigational aids are of such a minor nature that they are
16 not significant to us. We have a minimum of aids.

17 MR. JACQUES: Might I file this statement,
18 my lord, as Exhibit 474, a statement of the cost of
19 major facilities, locks, canals, aids to navigation in
20 the St. Lawrence Seaway.

21 THE CHAIRMAN: What is the total of that,
22 Mr. Jacques?

23 MR. JACQUES: The exhibit is being passed
24 up to you, sir.

25

26 ---EXHIBIT NO. 474: Statement of costs of major
27 facilities, locks, canals
28 and aids to navigation on
St. Lawrence Seaway.

29

30

MR. JACQUES: The total is \$198,595,578.00.



1 Q. Now, would you explain briefly this
2 statement as to where you obtained the figures stated under
3 the heading "Cost of Locks"?

4 A. The cost of locks is divided into the
5 St. Lawrence River section, being the approaches to St.
6 Lambert lock, the Cote St. Catherine's lock and the Upper
7 Beauharnois, Lower Beauharnois and Iroquois locks. Each
8 is shown separately, for a total of \$114,707,947.00.

9 The cost of the Welland section, listed against
10 the locks, is \$83,887,640.00. The Welland section is not
11 itemized per lock since the construction began prior to
12 1930 and our present records do not include them. Now,
13 turning to the cost of canals ...

14 Q. The cost of locks, would that be the
15 actual cost to the Authority or would there be any
16 depreciation?

17 A. No. That is the cost to construct that
18 lock.

19 Q. It would include all the accessories to
20 the lock also?

21 A. That is the total.

22 Q. And the cost of the canals?

23 A. It sets out there that the only canal
24 in the St. Lawrence River section that we can identify is
25 the South Shore Canal, for which the cost of excavation and
26 dyke construction was recorded as \$41,591,372.00. Other
27 costs, dredging, sweeping, etcetera, relative to channels
28 in the canals in the St. Lawrence River section total
29 \$75,060,365.00.



1 Q. And the Welland Canal?

2 A. The Welland Canal, the Authority has spent
3 \$27,313,243.00 on dredging, etcetera. And the value taken
4 from the Department of Transport, for which we have no
5 details, is \$36,435,591.00, for a total of \$63,748,834.00;
6 the total cost of canals being \$180,400,571.00.

7 With respect to the aids to navigation, this
8 statement shows that our records do not segregate those
9 costs. In any event, as the Department of Transport is
10 responsible for aids in the connecting channels and the
11 Authority would bear the costs only of aids at locks, the
12 Authority cost would be negligible.

13 Q. One last question. Would you also
14 bring tomorrow morning a statement of the fees which are
15 charged for transiting the canals?

16 A. That is included in the Masters'
17 Handbook, if I may say.

18 Q. Thank you.

19 A. Bearing in mind that fees on the
20 Welland were suspended as of July of last year.

21 Q. So this would be the only change in the
22 exhibit which has been filed?

23 A. That is correct.

24 Q. Would you now file your report for
25 1962, as Exhibit 475?

26 A. That is the traffic report of the St.
27 Lawrence Seaway, 1962. This is a joint report, prepared
28 by the St. Lawrence Seaway Authority and the St.
29 Lawrence Seaway Development Corporation of the United
30



1 States.

2 Q. And this report, in tables 9 and 10,
3 which show the class of vessel, the type of cargo which
4 transited through the Seaway and also the traffic by
5 country of registry?

6 A. There are two sections. The St. Lawrence
7 and the Welland section are shown separately, one being
8 on pages 26 and 27 and the other on pages 48 and 49.
9 There is a considerable mass of details in that report.

10

11 ---EXHIBIT NO. 475: Joint report on traffic of
12 St. Lawrence Seaway, 1962.

13

14 MR. JACQUES: Thank you, sir.

15

16 THE CHAIRMAN: We will adjourn now until
17 ten o'clock tomorrow morning.

18

19 MR. JACQUES: Very well, my lord.

20

21

22 --- Whereupon the hearing was adjourned at 4:45 p.m.

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ROYAL COMMISSION

ON

PILOTAGE

HEARINGS

HELD AT

MONTREAL QUEBEC

VOLUME No.:

DATE:

38

English Text

June 27th, 1963

OFFICIAL REPORTERS

ANGUS, STONEHOUSE & CO. LTD.
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TORONTO

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ROYAL COMMISSION ON MARINE PILOTAGE

Proceedings of the hearing
held at the Court House,
Montreal, Quebec, on the
27th day of June, 1963.

COMMISSION:

The Honourable Mr. Justice Bernier	Chairman
Robert K. Smith, Esq. Q.C.	Member
Harold A. Renwick, Esq.	Member

Mr. Gilbert Nadeau

Secretary

COMMISSION COUNSEL:

Mr. Maurice Jacques

Mr. Leopold Langlois, Q.C. for the Canadian Merchant
Service Guild

PRESENT:

Mr. J. Brisset) for the Shipping Federation
Mr. H. Collet) of Canada

Mr. J.M. Jacques for the National Harbour
Board

Mr. J. Mahoney) for the Dominion Marine
Mr. C. Mason) Association

Mr. Marc Lalonde for the Federation of St.
Lawrence River Pilots; Cor-
poration of the Lower St.
Lawrence Pilots; the Corpora-
tion of the Mid-St. Lawrence
Pilots; the Corporation of
the Montreal Harbour Pilots;
the Corporation of the St.
Lawrence River and Seaway
Pilots; the Corporation of
the Upper St. Lawrence
Pilots



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II

1 ALSO PRESENT:

2 Captain J.S. Scott, Technical Advisor to the
3 Commission

4 Captain F.S. Slocombe, for the Department of
5 Transport and liaison officer

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A/BL/ss 1
English)

---On commencing at 10:00 a.m.

4356

2
3 MR. JACQUES: My lord, we have inquired from
4 the Department of Transport in respect of notices to
5 mariners being printed in French, and I have been instruc-
6 ted that they are not available in French, and the only
7 French text of notices to mariners would be the notice to
8 shipping prepared by the District Marine Agent, prepared
9 locally and distributed locally.

10 My lord, I am interrupting Mr. Burnside's
11 testimony to hear Mr. Dansereace.

12
13 ALBERT DANSEREACE, sworn:

14
15 DIRECT EXAMINATION BY MR. JACQUES:

16
17 Q. What is your occupation?

18 A. Assistant Maritime Registrar, Port of
19 Montreal.

20 Q. Since when have you had this job?

21 A. For three years.

22 Q. As Assistant Maritime Registrar, do you
23 receive notices to mariners and notices to shipping?

24 A. Yes, sir.

25 Q. Are you concerned with the distribution
26 of these notices?

27 A. Upon request by the agents and the
28 captains.

29 Q. Is there an automatic distribution of
30 these documents?

A. We receive a certain amount of those



English1 every week; let's say 50, notices to mariners and notices
2 to shipping.

3 Q. And you distribute these only upon
4 request?

5 A. Yes.

6 Q. Have you received similar notices on
7 behalf of the Seaway Authority?

8 A. Yes, the Authority, Seaway notices,
9 everything that is going on in the Seaway.

10 MR. JACQUES: If your lordship pleases, I
11 should like to enter as Exhibit 476 examples of notices
12 to shipping in English, published by the District Agent
13 of Maritime Services. Also a copy of a document called
14 "Seaway Notice," published by Mr. Burnside, Director of
15 Operations, of the Administration of the Maritime Seaway,
16 St. Lawrence Maritime Seaway.

17 ---EXHIBIT NO. 476: Examples of notices to shipping publish-
18 ed by District Agent of
CROSS-EXAMINATION BY MR. LALONDE: Maritime Services

19
20 Q. Do you receive the same number of notices
21 to shipping as notices to mariners?

22 A. Not as many, not every week. They are
23 all numbered. It is every ten days. It depends on what
24 is going on in the Seaway.

25 Q. Every time you receive them do you
26 receive 50 copies?

27 A. Yes.

28 Q. Concerning notices to shipping, do you
29 also receive the same number?

30 A. Yes.



English 1 Q. Do you distribute all those you receive
2 in general?

3 A. In general, about three-quarters.

4 Q. Do you have a list of all the persons
5 to whom you send these documents, or do people come to your
6 office and ask for them?

7 A. We get a request, the captains coming
8 themselves asking for authorization, clearance.

9 Q. I have your notice to shipping dated
10 June 18th, 1963. Can you tell me at what date you
11 received this document?

12 A. I can't say the exact date. Some days
13 we receive them on the same day and sometimes the next
14 day. That doesn't indicate the day we receive it on.

15 MR. LALONDE: That is all, thank you.

16
17 RE-EXAMINATION BY MR. JACQUES:

18
19 Q. You said that you distributed these
20 notices to captains who come to ask for authorization of
21 their ship. Would you explain what you mean by clearance
22 or authorization?

23 A. Some ships have agents, and the agents
24 come to us for this, because every ship going to a foreign
25 country must ask for a clearance to the customs department.
26 That is done either by an agent, if the company has an
27 agent, or if they don't have an agent, the captain himself
28 does it.

29 Q. Is this clearance requested by all ships?

30 A. Yes, all ships going to foreign countries



English 1 are obliged to ask for the clearance.

2 Q. So the ships on the home trade don't
3 have to come to your office?

4 A. Those who have a home trade permit don't
5 havw to ask for customs clearance.

6 Q. So you don't see those?

7 A. No. I send a report for each trip to
8 clarify the file.

9 Q. Do you distribute these notices, Seaway
10 notices to shipping and notices to mariners?

11 A. Yes.

12 Q. And this is a document published by the
13 Department of Transport?

14 A. That is correct.

15 MR. JACQUES: My lord, if I could have the
16 exhibits which were filed yesterday.

17 Q. I am showing you two pamphlets, Exhibit
18 472. Are these the ones you distribute, notices to
19 mariners published by the Department of Transport and
20 Admiralty Notices to mariners published in England?

21 A. Yes.

22 MR. JACQUES: That is all. Does the Commission
23 have any questions to ask the witness?

24 THE CHAIRMAN: Mr. Dansereace, you send notices
25 to shipping concerning temporary changes, at least all
26 changes, and those which are permanent changes are also
27 going to be published in the notices to mariners?

28 THE WITNESS: I don't know exactly the composi-
29 tion of each document.

30 THE CHAIRMAN: And I understand that any change



English or any modification on the aids to navigation would appear first in notices to shipping, and if it is something permanent, it is also published in notices to mariners. In all cases it is notices to shipping in the first place, and then if it is a permanent change it is put in notices to mariners.

MR. JACQUES: My lord, in respect to the publication of notices to mariners, I had planned to hear the responsible officers of the Department of Transport at the sittings in Ottawa to explain exactly their sources of information, how quickly they put them out and how often, but if the Commission wishes to have the answer at this sitting, I am sure we could get someone from the Department of Transport.

THE CHAIRMAN: I think it should be clarified. From what I gathered right now, all the information, all the changes in aids to navigation, through accident, of firm nature or otherwise, have to be brought to the attention of shipping, so therefore they are put first in the notices to shipping, and if they are of a permanent nature, they go to mariners.

MR. JACQUES: That is what I understood. For instance, any changes in the structure of a wharf, extension of a wharf, or any soundings might not be published in notices to shipping, but would be published in notices to mariners.

Would the Commission like to hear a witness in respect to notices to mariners here in Montreal?

THE CHAIRMAN: I think that would be sufficient.

MR. JACQUES: Very well, my lord. Whilst we



English 1 are on the subject, my lord, I have been supplied with a
2 copy of the mailing list of notices to mariners. I have
3 no one to give evidence on this document, so I will not
4 file it, but I will make it available to my learned
5 friends.

6 THE CHAIRMAN: So this is the list from Ottawa.

7 MR. JACQUES: I don't know, my lord. I have been
8 supplied with this list; it has been made and sent down .

9 THE CHAIRMAN: It is not certified.

10 MR. JACQUES: It is not certified. I don't know
11 whether it is complete or not.

12 THE CHAIRMAN: You had better investigate before
13 it is filed.

14

15 FURTHER CROSS-EXAMINATION BY MR. LALONDE:

16

17 Q. Mr. Dansereace, I might be wrong, but
18 concerning the interpretation given to the evidence so
19 far concerning notices to shipping, I think it has been
20 proved that all changes, all temporaty changes will be
21 in notices to shipping, but I don't recall if we have
22 clarified the matter concerning the district agents that
23 all changes should be published in the first place in
24 notices to shipping before appearing in notices to
25 mariners.

26 THE CHAIRMAN: I think you should read the
27 evidence on this matter. It seems that if you change a
28 buoy from its original place it has to be published first
29 in notices to shipping and they are published permanently
30 later.



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Dansereace, cr.ex.
(Lalonde)

4362

English¹

MR. LALONDE: I realize that, my lord, but

2 things are not always done that way.

3 MR. JACQUES: Does the Commission have any

4 questions to ask the witness?

5 THE CHAIRMAN: No questions.

6 MR. JACQUES: Thank you, sir.

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1 MR. BURNSIDE (recalled and sworn):

2

3 MR. JACQUES: The Seaway Authority, my lord,
4 has been kind enough to supply the Commission with a French
5 copy of the St. Lawrence Seaway Masters' Handbook, and it
6 has already been filed.

7 THE SECRETARY: That is Exhibit No. 470F.

8

9 DIRECT EXAMINATION BY MR. JACQUES (Continued):

10

11 Q. Mr. Burnside, before we move on to the
12 question of dispatching, I would ask you to explain to the
13 Commission how, when you amend Exhibit No. 470, which is
14 the St. Lawrence Seaway Masters' Handbook, and how you
15 circulate the amendments to this book?

16 A. Up to the present time the Masters'
17 Handbook has been revised. We found it necessary to revise
18 it each year, and that is the reason that the issues are
19 noted in the front of the book, the first issue being April
20 the 1st, 1959, just before the Seaway opened. This was
21 followed by an issue in the middle of February each year
22 following, the last being February of this year.

23 Now, eventually we hope that, to avoid such
24 extensive rewriting --- it is not rewritten so much of
25 necessity to change the meaning, but to improve the
26 context and the form, and a certain amount of changes that
27 experience has shown to be desirable.

28 Q. Have you got a mailing list of people to
29 whom you mail these amendments?

30 A. We notify the trade of the existence of



1 the book. Our regulations provide that each ship after
2 coming into the system is in possession of the current
3 volume. To the best of my knowledge, I am not positive
4 that we advise all the people who have had handbooks in
5 the past of the new book, but there is, I think, sufficient
6 provision to ensure that the new issue is in use.

7 Q. Do you check on masters who enter your
8 system to find out whether they have the latest amendments
9 to these regulations?

10 A. Not unless there is some special
11 necessity to do so. We get in the order of thirty ships
12 at each station a day, and it would be perhaps onerous,
13 and we consider it unnecessary, to do so. If there is a
14 discussion with the captain on the matter of one of the
15 things to be drawn to his attention, and explained if
16 necessary ---

17 Q. Do you automatically send the amend-
18 ments to the various pilotage authorities concerned
19 with the passage of ships through the Seaway?

20 A. I am not in a position of answering that
21 directly yes or no. Not to my knowledge. I believe
22 that this is done, but they are issued actually from
23 our Ottawa office, and the complete mailing list of
24 these books I am not aware of exactly who gets the
25 notice.

26 Q. Now, to come back to the dispatching.
27 Have you found the plan to which you referred yester-
28 day, showing the various stations?

29 A. The plan that is attached and included
30 with the Masters' Handbook indicates all these stations.



1 The legend ---

2 Q. Has this plan got a particular number?

3 There are several plans. This is plan
4 number 15074 on Exhibit No. 470?

5 A. That being Welland.

6 Q. And plan 15121, being a general plan of
7 St. Lawrence Seaway, Montreal to Maitland section, sheet
8 2?

9 A. They are listed as sheets 1 and 2.

10 Q. And would you indicate the dispatching
11 stations on these plans?

12 A. The first being V.D.X. 20, at Beauharnois.
13 The next in geographical order is Station K.E.F., dispatch
14 station number 2, at Eisenhower Lock in the American
15 section of the Seaway.

16 Q. Is this station manned by the Americans,
17 or by the Canadians?

18 A. It is manned and controlled entirely
19 by the Americans.

20 Q. Was the first station manned and con-
21 trolled by the Canadians?

22 A. Yes, the first one is a Canadian station.
23 The third station is V.D.X. 21, at Iroquois, another
24 Canadian station.

25 Q. And these three are the only dispatch-
26 ing stations?

27 A. There is a dispatching station on the
28 Welland Canal, at Thorold.

29 Q. Would you explain exactly how you do
30 your dispatching? Do the ships have to report to you



1 prior to entering the Seaway?

2 A. Yes, they do.

3 Q. How much notice do you require?

4 A. We don't receive, or require any
5 appreciable notice from the downstream end. The first
6 notice that we receive that a vessel is desirous of enter-
7 ing normally is from the Port of Montreal dispatcher, at
8 Montreal, who has given clearance to the vessel to
9 manoeuver through the port, and it is to him that the
10 master signifies his intention of coming into the Seaway,
11 and the harbour dispatcher, by land telephone, communi-
12 cates with our dispatcher at Beauharnois, and gives him
13 the name of the ship, and other particulars. That dis-
14 patcher then advises the harbour dispatcher whether he
15 is prepared to accept the ship at that time, and if
16 everything is in order, he instructs the ship that you
17 may proceed across the harbour to the Seaway entrance.

18 Q. Do you specify the time at which the
19 vessel must arrive at the lock?

20 A. No, we accept them as they are presen-
21 ted, and when the ship enters the Seaway he calls our
22 dispatcher by radio telephone, and gives the name of
23 the ship, and his position, and other essential parti-
24 culars. At that time our dispatcher tells the captain
25 whether he will have to go to the tie-up wall, or
26 whether he merely proceeds on the lock with the signal
27 lights.

28 As the ship proceeds up the system, there are
29 various calling-in points, where they must contact the
30



1 radio station, our radio stations in control, giving his
2 position, and from the knowledge of the time that the
3 ship is arriving there, and the approximate time that he
4 would arrive at the next lock, he is told whether he may
5 proceed, or whether it is necessary to go to anchor.

6 He approaches the lock, and is there con-
7 trolled by the lock signal lights. If the light is red,
8 he automatically must go to the tie-up wall, and await
9 the clear signal to enter.

10 Q. So the ship first reports to the
11 dispatching station, say, leaving Montreal, dispatching
12 station number 1, makes his wishes known, and is told
13 whether to proceed, or not to proceed, is that correct?

14 A. That is right.

15 Q. And as she proceeds through the Seaway
16 she reports at various points, in order that her position
17 may be established, and her speed controlled, is that
18 it, and the time she will be at the next lock?

19 A. The time is quite important, in that
20 he must judge the progress of the ships already in or
21 already at the lock and proceeding both in the direction
22 of the present ship of which we are talking, and in
23 the opposing direction.

24 The locks are single, so that normally
25 the upbound ship vacates and the lock is occupied
26 by a downbound ship, which gives the most efficient
27 operation.

28 When he calls at that time the dispatcher
29 makes his estimate of whether he may proceed to the
30



1 next lock, or whether he should hold at that anchorage
2 until advised to come on.

3 Q. And this procedure is repeated on
4 until the ship leaves the Seaway?

5 A. It is repeated at each station in
6 that general order, yes.

7 Q. Now, for a ship westbound would the
8 procedure be exactly the same?

9 A. What we have described would be the
10 west, or upbound.

11 Q. I am sorry, eastbound?

12 A. Yes, in general it is, except that in
13 the St. Lawrence section particularly we get notice of
14 the ship's arrival first at Maitland, the downbound
15 calling in point, which is located upstream from the
16 anchorage at Prescott. At that time the ship is
17 advised whether to come on to the Iroquois lock, or
18 whether it is necessary for him to anchor, and if he
19 is required to, he can anchor in the Prescott anchorage,
20 which is quite an extensive one, and can handle the
21 shipping involved.

22 We don't get any pre-notice of the ship's
23 actual entrance. I should perhaps say that the ships
24 are pre-cleared by a pre-clearing document, which is
25 more of a financial transaction than an operating
26 factor as far as we are concerned. The ships are
27 taken on a day to day and hour to hour basis. We have
28 no previous knowledge.



AG/RPS 1
English

Q. How long would a transit take from

2 Montreal to Lake Ontario?

3 A. Well, from Montreal to Iroquois, which is
4 our last station is of the order of 18 hours.

5 Q. 18 hours?

6 A. Yes, to arrive at the entrance to the
7 Welland and the opposite end of Lake Ontario is of the order
8 of 40 hours.

9 Q. Does that include time in the lake?

10 A. That includes the time from entering the
11 Seaway at St. Lambert to arrive at Port Weller. Of course
12 it varies considerably.

13 Q. Port Weller?

14 A. That is the downstream end of the Welland
15 Canal.

16 Q. You are aware that some ships take pilots
17 through the Seaway, and then some do not. Is that correct?

18 A. Yes.

19 Q. I believe that the lake ships do not take
20 pilots, but ocean ships do?

21 A. Some of the lake ships do take pilots I
22 believe. We have no direct contact in that matter. We are
23 not advised. We are not concerned actually. There are cases
24 where the inland ships, perhaps by reason of infrequent pass-
25 age, or other reasons, may ask for the services of pilots,
26 but they don't ask us. We, of course, don't administer it at
27 all, but some of them do carry pilots.

28 Q. Based on your experience so far, have you
29 noticed any difference in the handling of let us say first
30 lake ships when there is a pilot aboard, and when there is



1 not?

2 A. No, I wouldn't know, we would not know the
3 difference between handling one ship and another.

4 Q. Now, as regards ocean ships?

5 A. Well, the ocean ships of course is quite
6 a different matter. They are designed for ocean trade.
7 Most of them were built without any special provision for
8 inland waters, where the channels are confined, and it is
9 an entirely different navigational problem altogether. So
10 that they are very much more difficult to handle. The
11 ship master is, I think, the man most capable of getting the
12 best performance out of any ship, but that does not mean at
13 all that he is the man who is the best capable of conning
14 a ship through the Seaway. If he has not been here before
15 it is a difficult procedure, and a great deal of our troubles
16 originate partly due to the fact that the ships aren't
17 ready for inland passage in respect to their steering facilities
18 their engines, their ballasting properties, and many other
19 things.

20 More than the handling of the precise ship, when
21 a person who is not familiar with an inland passage, I think
22 he would have a difficult time on his initial entry until he
23 is thoroughly familiar with it.

24 MR. LALONDE: My lord, could we request the
25 Commission Counsel to clarify for the Commission the Maritime
26 experience of the witness?

27 Q. Has the Authority ever considered enforcing
28 a rule which would render obligatory the taking of a wheelsman
29 aboard ships crossing the Seaway, ocean ships, your own
30 wheelsman?



1 A. No, not precisely. We have considered
2 from time to time the rather obvious advantage of having
3 the active portion of the ship's mechanism handled by
4 seamen familiar with the inland passage, but we haven't,
5 as you might say, done anything about this, or up to the
6 present time considered the times propitious to do so.

7 Certainly there is much to be desired in the
8 handling of the mooring winches, as compared with ocean
9 seamen unfamiliar with inland passage, as compared with an
10 inland seaman, familiar with the passage and familiar with
11 the operation of the winches. Part of it, of course, is
12 entailed in the mechanism of the winch itself, which may
13 be designed for such things as cargo handling and normal
14 docking of the ship, as opposed to quick checking of the
15 forward motion of the ship in entering the lock, or in
16 maintaining a constant tension on the mooring lines during
17 the raising and lowering of a ship, which is very important.

18 We have not up to this time entered upon any
19 specific regulations covering the mechanism of the mooring
20 winches. It is desirable, but it is like everything else a
21 matter of economy. There would be considerable money involved
22 in specifying that all ships must be equipped with a certain
23 type of winch. Actually, if it were done, I have no doubt
24 the trade would be unable to provide the facilities, certainly
25 on short order, to accomplish this.

26 The wheelsman, from our observation, certainly
27 would be more proficient is he were one accustomed to the
28 passage than if he were an ocean seaman who were not familiar
29 with inland passage.

30 Q. Do you think that such precaution would make

1 transits quicker?

2 I think that if that were done the transits
3 would be more easily made, and no doubt it would tend to
4 reduce the difficulties that arise. There are many other
5 factors, of course, involved in this too.

6 Q. Now, again based on your experience so
7 far, and on the record of accidents, do you think that
8 there would have been fewer accidents if ships had been
9 obliged to take on your own wheelsman, for instance, or your
10 own linesmen?

11 A. Yes, I think that it would.

12 Q. To what extent?

13 A. That would be very difficult to say. The
14 two ships we are contrasting, the inland ships which have
15 wheelsmen and linesmen who are familiar with the passage,
16 with the ocean ship that does not. The structure of the
17 ocean ship is so different from the inland that I would
18 find it difficult to estimate how much of the added diffic-
19 ulties that the ocean ships encounter versus the inland
20 ships, and how much of that should be laid to the inexper-
21 ience, shall we say, of the sailors. I would find it
22 very difficult.

23 I should say though that at the Welland Canal,
24 where the conditions are perhaps more concentrated, and
25 therefore more precisely controlled, we find that the ocean
26 ships have been involved in accidents to the order of some
27 12 or 13 per thousand passages.

28

29

30



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Burnside, dir. ex.
(Jacques)

4373

PE/RPS 1
English

Q. Is that high?

2 A. As contrasted to the inland, it would be
3 of the order of 2-1/2 or 3 accidents per thousand passings.
4 Now, a great deal of that is due to the design of the ships
5 and while I am at it I should say that the pilots have
6 done, I am sure, yeoman service in handling the ships, the
7 ocean ships, as they have done so successfully, as they
8 have done under difficult conditions of piloting ships
9 designed for ocean traffic through very confined inland
10 waters.

11 Q. Has it ever happened that a collision or
12 an accident of any kind put your canal, your Seaway out of
13 operation for any length of time?

14 A. Oh, yes. We have had -- I was commenting
15 yesterday that we had one several hours' delay the night
16 before last, due to a ship. This particular one happened
17 to be a downbound ocean ship. We have had them with the
18 inland ships as well.

19 MR. JACQUES: Thank you, sir.
20

21 CROSS-EXAMINATION BY MR. LALONDE:

22 Q. At the conclusion of your evidence, you
23 mentioned that there happened on various occasions that
24 traffic would be stopped or delayed for some time?

25 A. Yes.

26 Q. Two hours or so -- because of some incidents
27 or accidents in the Seaway? In such circumstances, do you
28 send the notices automatically to the District Marine Agent?

29 A. Yes, the Marine Agent is notified of a
30 considerable delay or a potential considerable delay, partic-



1 ularly in the inland portion of the Prescott area where
2 all ships moving, or practically all of them, are designed
3 for Seaway traffic and it is really part of the Seaway
4 traffic en route to Toronto or Hamilton, or upstream to the
5 Welland Canal. I do not know that we are in as close
6 contact with the Sorel Agency, but there is quite a close
7 contact because the ships there, a considerable portion of
8 them are en route to the harbour and do not enter the
9 Seaway at all.

10 Q. Would you have with you information as to
11 the number of times and the length of time for which traffic
12 on the Seaway would have been stopped because of some
13 kind of accident or incident caused by a ship?

14 A. Well, I am not sure whether I have that
15 with me or not. I have a list here that would show the
16 delays to the navigation in the Welland Canal, if you will
17 bear with me for referring to the Welland, and the same
18 general conditions, I think, can be taken to apply in a
19 general way. They are listed under four different headings,
20 one being equipment. That would indicate our own lock
21 equipment, or bridge equipment or electrical power, or for
22 any other item. An obstruction would be, normally, an
23 obstruction to the movement of the lock gates which quite
24 frequently occurs due to fenders coming dislodged from the
25 ship and sinking and obstructing the movement of the gates.
26 And the vessel, which is obvious, the accident due to a
27 vessel movement of some kind, and then there is the weather.
28 These are totalled for last year on the Welland. The equipment
29 was 17 hours and 6 minutes; obstruction 6 hours and 10 minutes;



1 vessel 97 hours and 8 minutes and the weather 474 hours and
2 52 minutes, for a total of 595 hours and 16 minutes.

3 If we might contrast that with the average
4 condition as it existed since 1959, when the Seaway opened,
5 those same figures -- Would you be interested in that?

6 MR. LALONDE: Yes, I am definitely. I do not
7 know whether the Commission is.

8 THE CHAIRMAN: Yes, we are.

9 THE WITNESS: The equipment, the average of the
10 years 1959 to 1962, was 70 hours and 54 minutes; obstruction
11 17 hours, 51 minutes; vessel 92 hours and 26 minutes; the
12 weather 354 hours and 30 minutes, for a total of 535 hours
13 and 25 minutes. It might be interesting to indicate some-
14 thing of the impact of the ocean trade on our mov-
15 in the Welland.

16 Q. May I interrupt here?

17 A. Yes.

18 Q. All the information you are giving is
19 concerning the Welland Canal itself?

20 A. It is the Welland Canal.

21 Q. From Port Weller?

22 A. To Port Colborne -- the 27 miles is the
23 eight locks. The average for the years of 1955 to 1958,
24 before the appearance in volume of the ocean ship under these
25 same headings, gives equipment as 85 hours and 21 minutes,
26 obstruction eight hours and 56 minutes, vessel 24 hours and
27 21 minutes, the weather three hundred and one hours and fifty-
28 eight minutes, for a total of 423 hours and 42 minutes.

29 The most significant thing there, I think, would be in the
30 obstruction, which is doubled on the average from the years



1 since the Seaway had opened to the previous years under
2 study and the vessel, which was of the order of just under
3 four times as great. Now, the weather remaining constant,
4 it is not affected too much by the ocean ships. But,
5 the significant thing is that the ocean ships are, in some
6 cases, difficult to handle in the confined waters of the
7 lock.

8 Q. You said that there was four times as
9 much delay due to ocean going ships now than before in the
10 Welland Canal, roughly; is that it?

11 A. The total delays on the Welland Canal,
12 due to vessel movements, was of the order of four times,
13 now that the ocean ships are there, to what it had been
14 when they were not there. Now, that is not all due to the
15 ocean ships, because the inland ships are becoming larger
16 and there are more and more ships. The traffic itself is
17 heavier, not necessarily in the volume of ships by numbers,
18 but in the size of the ships. They are becoming larger
19 all the time and, hence, more likely to have difficulty in
20 the locks.

21 Q. Will you not have a larger number of ocean-
22 going ships on the lakes now than before the Seaway opened?

23 A. That is precisely what I mean.

24 Q. There is definitely not only the question
25 of size, then, but also the question of the number of ocean-
26 going ships involved?

27 A. Yes. That was particularly noticeable
28 as the Seaway opened, that the ocean ships found it difficult
29 to manoeuvre. They are not designed for it.

30 Q. And the question of size would apply both



1 to lakers and to ocean-going ships, obviously?

2 A. It would, particularly to the ocean ships,
3 because only the canal-size ocean ship of the order of
4 two hundred and sixty odd feet long were able to get up the
5 old canal system and then get into the Welland at all.
6 Now, the larger ocean-going ships can come in and do come
7 in, of course.

8 Q. You do not have with you any figures
9 concerning the rest of the Seaway, do you?

10 A. I am sorry. I do not think I do.

11 MR. LALONDE: Can I first have you produce, as
12 an exhibit, the information contained in what you read concern-
13 ing the Welland Canal?

14 THE SECRETARY: That will be Exhibit 477.

15 THE CHAIRMAN: Before that, if the exhibit was
16 read all over, it might not be necessary to file it.

17 THE WITNESS: I have the individual years from
18 1955 to 1962. I read only 1962 and the averages of 1955,
19 1958, 1959 to 1962.

20 THE CHAIRMAN: I think, in such a case, it would
21 be advisable that we have it filed as an exhibit.

22
23 ---EXHIBIT NO. 477:

List indicating delays to
navigation in the Welland
Canal for the individual years
of 1955 to 1962 from Port
Weller to Port Colborne

26
27 MR. JACQUES: I am sorry to interrupt my learned
28 friend, but could we ask the witness to prepare a similar
29 document, or to provide the Commission with similar information

30



1 as regard the rest of the Seaway?

2 THE WITNESS: Our records are not as complete
3 on the rest of the Seaway. We will make our best endeavour
4 to do so. There are reasons why it is not so easily
5 comparable, one period to another, due to changes in the
6 new system; but we will undertake to do our best to present
7 a similar document.

8 MR. JACQUES: Thank you.

9 THE WITNESS: I might say that they are subject
10 to misinterpretation, perhaps, in that the conditions on the
11 new part of the Seaway are more likely to be influenced by
12 one individual instance, than they are in the Welland, where
13 conditions from one end of the canal to the other and much
14 the same. And the evidence that we will produce might tend
15 to counter that, in the actual adding of the hours.

16 Also, I should say this, that the Welland Canal
17 is concise and controlled by ourselves, in that all that
18 occurs within the Welland Canal, the 27-odd miles, is a matter
19 of concern, individual and precise concern, to us; whereas
20 a matter of concern in the open areas is not ours and we
21 do not have the figures under the same conditions.

22 MR. JACQUES: In view of that fact, I wonder if
23 it might not be wiser to recall the witness when he has had
24 time to compile the requested information?

25 THE CHAIRMAN: I think it would.

26 MR. JACQUES: We are going to be here for several
27 days yet, and when we have compiled the informtition, would
28 you be kind enough to get in touch with me?

29 THE WITNESS: Yes.

30 MR. JACQUES: Thank you.



1 Q. For the purposes of the record, may I
2 clarify again this document. It is a sheet of paper entitled
3 "Delays to Navigation, Welland Canal, 1955 to 1962." You
4 have a category called "Obstruction" on this sheet. Would
5 you please explain what this means?

6 A. "Obstruction", as used there, would indicate,
7 normally, an obstruction to the movement of a lock gate.
8 We have had a great deal of trouble with rope fenders, which
9 is used quite frequently in the ocean trade, as a fender
10 to a ship and when they are dislodged and torn from the
11 ship, they become waterlogged and sink and since our gates
12 are manipulated by cables which are very close to the bottom
13 of the canal, these ropes become entangled in the cable
14 and plug the cables, so that they will not run off the
15 ship and also they are quite prone to be caught between the
16 sill of the gate and the gate itself and we are unable to
17 move the gate.

18 That is the general meaning of "obstruction". It
19 is not, as might be inferred, an obstruction to the passage
20 of a ship by reason of some object on the bottom. That is
21 not involved.

22 Q. You were referring to the other portion of
23 the Seaway and you said that the situation there will be
24 influenced by the fact that you do not control the whole
25 portion between Montreal and Kingston?

26 A. By reason of the fact that we do not get
27 the reports. However, we have observers and operators on
28 each structure, so that the ship is under observation during
29 most of its passage through the Welland and any accident
30 that occurs is probably known to our men; whereas that is



1 not the case in this portion of the Seaway.

2 Q. Where does the Seaway begin, at St. Lambert?

3 A. It is at the foot of the dike downstream
4 from the Jacques Cartier bridge.

5 Q. And can you tell me where your jurisdiction
6 ends at the other end of the canal, in the St. Catherines
7 lock or any other area?

8 A. Well, it is, again, at the . . .

9 Q. Excuse me. I will show you a map.

10 A. Yes. I am showing you map 1410, entitled
11 "Lake St. Louis", which has been produced as a part of
12 an exhibit.

13 THE SECRETARY: Number 453.

14 MR. LALONDE: Thank you.

15 Q. Could you describe the end of your jur-
16 isdiction in this part of the Seaway?

17 A. The South Shore Canal, which is under our
18 jurisdiction, would end at the upstream limit of the dike,
19 at the downstream end of Lake St. Louis, upstream from
20 Caughnawaga.

21 Q. Would this mean the point roughly indicated
22 by "R.R.", the black point at the other dike?

23 A. The flashing red light, yes.

24 Q. That is the end?

25 A. The end of the dike is the location and
26 this shows a flashing red light as being located there.

27 MR. JACQUES: Is it not a fixed red light?

28 THE WITNESS: Maybe it is fixed. We do not administe
29 the lights.

30 Q. Looking at the report on accidents yesterday,



nglish

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1 which you have produced as Exhibit 473, I found that you
2 reported an accident which occurred on May 30th 1959, at
3 the vessel named "Olga", and the explanation of this
4 accident has the following mention . . .

5 A. Might I ask -- the Central Region . . . ?

6 Q. Excuse me. It is the Central Region.

7 A. And the date, again?

8 Q. May 30th, 1959. Again, that report
9 bears the following mention: "Nature: While proceeding
10 "through the Seaway channel, near Caughnawaga,
11 "about halfway between buoys 1A and 5A, vessel
12 "struck the south bank." Would this be within
13 or without your jurisdiction?

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D/BL/RPS₁

(English)₂

Q. That is just at the entrance to our

system and just across the channel at the entrance.

Q. From what you said before, the limits of

the Seaway Authority jurisdiction ends at the end of the

dike where there is a fixed red light sign, a flashing red
light sign?

A. That is correct.

Q. Would you mark buoy 1A and 5A with an

X on this map?

A. Yes.

Q. And this would appear to be outside the

limits of the jurisdiction of the Seaway, would it not?

A. Just outside.

Q. Have you been aware that there was an

accident involving a lake ship called the "Teak Bay", owned
by Canada Steamship Lines, which went aground on Lake St.
Louis in 1962 and which does not appear in your report?

A. Normally in our reported figures they are

taken to be within the confines of our system or immediately
across the entrance. I don't recall occasion of the "Teak
Bay" incident to which you refer. To my knowledge, it is
not in our list.

Q. Yes, I have not found it in your list,

and due to the fact that I have found that incident which has
occurred outside your jurisdiction, I was wondering why this
one appeared and the "Teak Bay" did not appear?

A. The only explanation that I -- the best

explanation I can give to that is that since the occurrence

was immediately across our entrance it would be of greater

concern to us by reason of any delay which might occur than at



English 1 a remote location where the ship aground would be free of
2 the channel and the movement of shipping would not likely
3 be disrupted.

4 Q. If you look at the map of Lake St. Louis,
5 is it not a fact that the channel at that place between
6 1A and 5A is quite substantially narrower than other places
7 on St. Louis?

8 A. Well, it would appear that it is one of
9 the narrowest places. There may be others that are approx-
10 imately the same width. Certainly there are most areas which
11 are wider.

12 Q. But would it be the case that here they
13 would be approximately the same width?

14 A. It would appear so.

15 Q. And if the "Teak Bay" had gone aground
16 there it would have delayed shipping more?

17 A. I doubt that, where it would appear feasible
18 for a ship to manoeuvre outside the indicated navigation
19 channel before going aground, whereas in the 1A-5A area the
20 channel is through comparatively shallow ground and there is
21 little, if any, possibility of a ship going outside the
22 navigation channel. It couldn't lay outside.

23 Q. I don't want to labour this point anyway. It
24 remains that the accident which was reported there
25 was outside your jurisdiction and some other accidents which
26 have occurred in areas outside your jurisdiction are not
27 reported?

28 A. That would be correct.

29 Q. Thank you. Have you been aware of an
30 accident involving a ship called the "Andora" in 1959 at Snell



English 1 Lock?

2 A. I have. That is, my memory, which is not
3 complete, would indicate it was immediately downstream from
4 the Snell Lock, which is under the jurisdiction of the
5 Seaway Development Corporation of the United States, it is
6 not under our jurisdiction.

7 Q. Do you remember if traffic was delayed or
8 stopped at that time?

9 A. I recall that navigation was perhaps
10 impeded, made somewhat more difficult at that time, but I
11 don't recall it was stopped or not. If so, it was for a
12 fairly short time and it was allied to the process of freeing
13 the ship by reason of the cables which had to be laid across
14 the channel.

15 Q. Would you mind, since you are likely to
16 be recalled by the Commission, checking this information from
17 your records in the meantime?

18 A. Our records in that connection will very
19 probably be very sparse by reason of the fact that the incid-
20 ent occurred in an area under the control of our partners, the
21 American corporation. However, I will check and see what we
22 have.

23 Q. The only information I am requested is
24 whether there was stoppage or delay of the traffic on that
25 occasion?

26 A. The "Andora"?

27 Q. Yes, "A-N-D-O-R-A".

28 A. May I have the date of that?

29 Q. In 1959, roughly after the opening of the
30 Seaway. And would you check at that particular time whether



English 1 notice to shipping was sent to the Marine Agent at Prescott?

2 A. I will see whether our records indicate
3 that, sir.

4 Q. In your evidence you mentioned that in your
5 opinion there would be obvious advantages in having special
6 wheelmen for the ocean-going ships using the St. Lawrence
7 Seaway, and you said that it was found that, if I am quoting
8 you correctly, that the time was not propitious for this
9 purpose.

10 A. What would be indicated there was that
11 there were so many other things which would be done within
12 economic time feasibilities of improving the manoeuvrability
13 of an ocean-going ship that this item was not proceeded
14 with further.

15 Q. You mean that the St. Lawrence Seaway
16 authority had so much work on its hands in other ships that
17 it didn't feel it could do this?

18 A. No, not so. But there were more important
19 items of much greater effect on the capacity of the Seaway
20 than that particular item, in our opinion.

21 Q. And your yourselves, the Seaway Authority,
22 would not take it upon yourselves at the present time to
23 organize such a system?

24 A. I would think it would be extremely
25 unlikely at this time, unless other evidence changed that
26 opinion.

27 Q. I understand you would not have any
28 objection if this could be organized otherwise, without the
29 trouble of going into it?

30 A. You did well in that last item there. We would



English 1 have no objection. I am sure we would be pleased, as far
2 as I am concerned.

3 Q. I think my friend Mr. Jacques questioned
4 you also on the linesmen?

5 A. Yes.

6 Q. You mentioned that you have linesmen of
7 your own inside the lock?

8 A. Yes, on the lock structures.

9 Q. Do you have any linesmen at the approach
10 walls?

11 A. Not within the limits of the from Montreal
12 to the Lake Ontario section, on a regular basis. There are
13 occasions when men are dispatched from the lock structure
14 to assist a ship in obvious difficulties and assist in the
15 lines. That again is done at the entrance to the Iroquois
16 lock where it is sometimes necessary, due to windage, to
17 send men down due to the wind. But that is in the process
18 of entering the lock rather than in the process of tying
19 to the wall.

20 Q. Do you have a different system in the
21 Seaway, because you mentioned between Iroquois and Montreal
22 this was the system?

23 A. There is one place in the Welland Canal
24 between lock 8 and bridge number 20 where downbound ships
25 coming in off Lake Erie are normally more, and at that
26 particular location this gets a little involved. It is a
27 site near the site of the hydro power corporation, and we
28 provide the linsemen there. It is a specific case.

29 Q. Do you know whether you have fairly frequently
30 or very frequently ships tied up at the approach walls waiting



English 1 to enter the locks?

2 A. Yes, that is very frequent. It is almost
3 normal.

4 Q. In view of this, would the practice be
5 in effect that the ship would have, on its own power, to
6 approach the approach wall and let one man or a couple of
7 men of their crew jump on the approach wall and tie up the
8 ship?

9 A. That very frequently happens. It is
10 normal practice in that context.

11 Q. Have the Seaway Authority ever considered
12 the opportunity of providing the service of linesmen at the
13 approach walls also due to the fact that so many ships have
14 to tie up at the approach walls and due to the fact that
15 this procedure is obviously a difficult one, due to wind,
16 coming to the approach wall and having men jump on the approach
17 wall to tie up the ship?

18 A. I think the term jump on the wall -- they
19 are put on a landing boom which is swung out and they are
20 lowered on the wall. Yes, it was considered.

21 Q. Is there any particular reason why it
22 wasn't put into practice?

23 A. The reason was a matter of economic, the
24 costs were significant, and there were strong representations,
25 I recall, at the time from certain segments of the inland
26 trade that this was not necessary and they objected to the
27 added cost becoming a burden on a person using the Seaway at
28 that time, and for that reason, one reason, it was not done.

29 The second reason perhaps would be that by no
30 means a great proportion of the trade would require the men,



English 1 and we were somewhat loath to put men in that position were
2 they wouldn't be engaged and they might become negligent,
3 shall we say. It is difficult to explain.

4 Q. You said you had strong representations
5 from the inland trade. Would that be representations from
6 the Dominion Marine Association?

7 A. Yes. One, the Lake Carriers Association
8 in the United States objected, as I recall.

9 Q. Did you have any objections from the ocean-
10 going trade?

11 A. We canvassed the ocean-going trade very
12 thoroughly through the Shipping Federation in Canada, and
13 while it was practically unanimous that they would favour
14 the use of linesmen on the line, when they were advised they
15 would have to pay for it, it was not received well and it
16 was not unanimous.

17 A. As a matter of fact, are you aware of a
18 ship call -- I think it is an Egyptian ship -- the
19 "Sala Eldhin", and that ship had a man who was killed at the
20 upper Beauharnois approach wall trying to go from the ship
21 to the approach wall?

22 A. I recall that incident, yes.

23 Q. Do you know the particulars of this incident
24 or the facts of this incident?

25 A. The facts, as we could find them -- we did
26 not have an observer at the site; our linesmen are removed
27 from the ship, it is not under continual observation, and as
28 I recall, the ship made her approach to the wall and swung
29 the seaman over the side on a boom and the ship came into
30 abruptly or too quickly and glanced off the pier with some



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English 1 violence, the extent of it we don't know, and the ship
2 then left the pier and the ship's officers proceeded to
3 recover the man.

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AG/RPS/H
(English)

1 As he approached the side of the ship he said that he
2 couldn't hang on any longer, and he dropped. The reports
3 indicated that he swam the length of his ship, and although
4 they threw life rings to him, and ropes I believe, but
5 certainly the life rings, he made no attempt to catch them,
6 and by the time that the ship would be back to the wall further
7 along and get men ashore he had disappeared.

8 Now, I do understand also that he was swinging
9 on what we refer to as a manrope line, not equipped with the
10 crossbar that is in normal use, and we have no indication
11 that he was equipped, or fitted with a safety jacket.

12 That we don't know of our own knowledge, but those
13 are the circumstances as we take them from our reports.

14 MR. JACQUES: Can you tell whether there was a
15 pilot on board then?

16 THE WITNESS: No, I certainly assume that there
17 was. In the normal course of events there certainly would be.

18 MR. JACQUES: I understand that this accident
19 took place early in your operations of the Seaway?

20 THE WITNESS: No, no, this one to which I refer
21 is quite recent. It was this year. I haven't the date in
22 front of me.

23 MR. JACQUES: Had your inspector been aboard the
24 ship before?

25 THE WITNESS: Yes. Every ship is inspected in
26 the Port of Montreal as far as our time permits. There may
27 be a few get passed, I am afraid, not as a general thing, and
28 I have no reason to think that that was not inspected, in
29 which they run over the fairleads, the fact that it is fitted
30 with a landing boom.



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1 MR. JACQUES: Do they inspect the landing
2 boom?

3 THE WITNESS: In a general way. I should say this
4 that we interfere, if I may use that term, as little as
5 possible in the fitting of the ships, as long as they
6 are within the regulations set forth. Now, I would also say
7 that this incident drew our attention, very roughly and very
8 sadly to the fact that many of the ocean ships still tended
9 to fit the booms somewhat differently than had been proven
10 satisfactory, and generally safe, in the inland business for
11 years, and that we have issued a Seaway notice particularly
12 referring to the landing booms, and recommending to them
13 that they have fittings found most advantageous over the years.
14 Not all of them agree, but that is the general ---

15 MR. JACQUES: Was the Seaway notice issued before
16 or after this accident?

17 THE WITNESS: It was issued after this accident.

18 MR. JACQUES: And would your records show
19 whether your inspector had inspected the landing boom or not?

20 THE WITNESS: Not precisely. We have no --
21 even at the present time we have no regulation that states that
22 the landing boom must be of a specific character. We recommend
23 that it be of a specific character, consisting of a single
24 rope, rather than a bosun's chair, which would perhaps tend
25 to entangle the seaman's legs, and make it difficult for him
26 to leave the chair on the wall. Ours indicates the fitting
27 used for use on the lakes, and most of the captains, not all
28 of them, of the inland trade found that the correct investment.
29 We would not specify it.

30 MR. JACQUES: But don't you consider it part of the

1 efficiency of your operations to ensure that the members
2 of the crew are landed securely, safely, and quickly on
3 the tying up wall?

4 THE WITNESS: We consider it part of our duty
5 to regulate that a landing boom must be positioned on the
6 ship. We passed a boom that is within the limits. Now,
7 we would not stop a ship because he used two ropes. We would
8 not stop a ship because he used a bosun's chair, as I
9 understand it, rather than a single bar, or even if he put
10 a loop, bight, in the line, and hung his foot in it.

11 There are many different fittings. We indicate
12 at the present time the one that we consider the best, and
13 it is not even a regulation within our province that the
14 man be equipped with a lifejacket. We recommend that he
15 be equipped with a lifejacket. We would not turn the ship
16 back because he was not.

17 While we have perhaps talked quite a bit about
18 things that we recommend, or even those that we enforce, but
19 the very few that we enforce is a very small proportion to
20 the many safety factors that are aboard the ship which we
21 have nothing specific to do with. It is a condition of the
22 trade, and we merely touch the surface, shall I say, in the
23 particular part that affects us.

24 MR. JACQUES: Thank you sir.

25

26 ---A SHORT RECESS.

27

28 Q. Mr. Burnside, before the adjournment we
29 were talking about the practice of using landing booms to
30 disembark seamen at the approach walls of the Seaway. You



1 mentioned that you could only make recommendations, I believe,
2 in that field, that it was outside your authority?

3 A. Well, what I said, or attempted to say,
4 was that we did not define with what appeared to us to be
5 too much precision the fittings on a ship, only in a general
6 way. There are various fittings used on the inland trade
7 which we were taking as longer experience in this particular
8 item, and we are giving the, we are recommending the
9 equipment that appears to us to be the best fitted and the
10 safest for the job.

11 Q. In the matter of anchor buoys, do you follow
12 the same procedure, or do you give specific orders?

13 A. With respect to the anchor buoys, this is
14 something that is comparatively uncommon for general navigat-
15 ion I believe, and this is something that requires some
16 lead perhaps. But we felt the trade would appreciate
17 various items which we -- we give I think three examples
18 of small, inexpensive and yet efficient buoys that would
19 accomplish the purpose.

20 We specify the nature of the attachment of the
21 buoy to the anchor. It must be right to the anchor itself,
22 but that is in somewhat different character, and only
23 sufficiently to accomplish the purpose. Secondly, because
24 the cost is not excessive in view of the cost to pass the
25 ship, whereas we might specify something quite ornate on a
26 landing boom or winch that would be too costly, which we
27 wish to avoid.

28 Q. But in the field of anchor buoys, neverthe-
29 less, you give instructions, or orders?

30 A. We have said that the anchors must be marked



1 to facilitate early recovery, which I think is quite
2 essential. Otherwise they wouldn't put them on at all,
3 and we get notices from ships occasionally that have lost
4 the anchor and it is marked, and the buoy there costs them
5 less money, and it costs us less money, and it avoids the
6 danger of a following ship striking it.

7 Q. And the reason you have not specified
8 for booms and winches is a matter of cost?

9 A. Yes, and a good, firm experience of
10 skippers is not of one. There is more than one agreeable
11 condition.

12 THE CHAIRMAN: Well, here I might interject
13 that we would like to have some enlightenment of what is
14 an anchor buoy?

15 THE WITNESS: We are having troubles from time to
16 time with an anchor becoming dislodged from the ship. The
17 chain breaks, or the flukes become entangled in the rocky
18 bottom, or some other reason. Ships go to anchorage in the
19 anchorage areas, or in emergencies in the channel itself,
20 and have lost their anchor, and when that happens we are
21 most concerned, because it is possible in our comparatively
22 shallow channels for the anchor to extend high enough from
23 the bottom that it might foul a following ship that would
24 navigate directly over it. So that to facilitate the recovery
25 we have them attach a small wooden buoy, for instance, it is
26 of the order of 18 inches long, and I have forgotten exactly,
27 but something like 6 inches diameter, which is tied with a
28 lead to the anchor itself, and it is made fast to the ship's
29 rail, outside the normal chain area, so that when the anchor
30 is dropped for any purpose the light attachment is torn off,



1 and the buoy is freed, and it goes into the water with the
2 anchor, and marks the location of it.

3 If that were not there we would have to sweep,
4 and we found it very difficult to determine the exact, precise
5 location of these anchors, because when they were dropped
6 in the channels particularly, it was usually an emergency
7 of some kind, and the master and his crew were much more
8 concerned with the safety of the ship than the precise location
9 of the anchor, and they vary very widely, the description
10 of where the anchor was, and it was very costly and time
11 consuming to locate it.

12 THE CHAIRMAN: Their main interest was not
13 yours. Yours was to have a clean anchorage area?

14 THE WITNESS: Yes, the main interest of ours was
15 to see that the channel was in fact unimpeded with a dangerous
16 anchor, or object.

17 THE CHAIRMAN: Thank you very much.

18 Q. Who pays for the recovery of anchors in
19 such cases?

20 A. The cost of recovery is for the account of
21 the shipowner, and it is for their payment.

22 Q. Is this carried on by the Seaway Authority?

23 A. It depends on the location. If it is in
24 our District we do it. If it is outside the District the
25 person responsible for the area is advised, and the reason that
26 we do ~~the~~ advising normally is that the ship is in constant
27 communication with one or other of the radio stations, and
28 incidents of almost any nature are most easily and quickly made
29 known to our stations, and they in turn notify the person
30 responsible.



1 I should say that in an emergent situation
2 there is a working arrangement that the closest equipment to
3 the site will proceed to do whatever is necessary for its
4 recovery. It is a working agreement as such.

5 Q. Would this be done by the District Marine
6 Agency?

7 A. Yes, or the St. Lawrence ship channel has
8 undertaken the sweeping in various areas of the lakes, so
9 that they would search and recover. Or the Marine Agency,
10 whichever unit was closest to it.

11 Q. And they would charge it to the ship?

12 A. I believe they do. We certainly do.
13 There have been occasions when there have been anchors
14 located, and no one acknowledged paternity, and we had
15 difficulty, but ---

16 Q. The Seaway is enriching itself by a few
17 anchors once in a while?

18 A. Occasionally.

19 Q. To come back to this question of landing
20 booms and approach walls, are you aware that there was another
21 accident, involving a German ship called the "Johanna", where
22 a seaman was injured and had to have his leg amputated? I
23 think the incident occurred in the Beauharnois system, because
24 the man was operated on at Valleyfield. I am instructed that
25 it was in Beauharnois itself. It was in last year, 1962?

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29

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English

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F/PE/RPS1

(English)2

1 A. I recall that a seaman was injured but
2 I do not recall the ship nor, at the moment, the precise
3 circumstances.

4 Q. I see. Would you kindly check whether you
5 have any information in this respect?

6 A. May I have the name of the ship?

7 Q. The "Johanna". For the purposes of the
8 record and at the request of my friend, Mr. Jacques, I may
9 mention that these two ships were ocean-going ships and both
10 had pilots on board.

11 A. And the date, please?

12 Q. 1962. I do not have the date, I am afraid.
13 It was at Beauharnois. I am sorry. It was in the spring of
14 1963, this year. If I understood you correctly, I think you
15 stated before that you believe that the practice of using
16 landing booms was a suitable one. Did you use that expression,
17 or a similar expression?

18 A. We had representations from the inland
19 trade, as represented by the Dominion Marine Association
20 and the Shipping Federation - or, not the Shipping Federation,
21 but their American counterpart, the Great . . .

22 Q. . . . Lake Carriers' Association?

23 A. The Great Lake Carriers' Association, yes.
24 I remember the meeting. Many of the captains who had spent
25 their lives on the lakes stated that they had never known
26 an incident where a man was seriously injured, in their
27 experience, by the use of a landing boom, and indicated quite
28 strongly that if it were properly used that the risk was
29 minimal. So that as a result of their experience, lasting
30 over a lifetime, we considered that with proper use it was



1 not excessively dangerous. We didn't at any time indicate
2 that we thought that it would be disadvantageous to have
3 linesmen on the approach walls. We are quite agreed that
4 it would be desirable, but it appeared to be economically
5 unacceptable to a considerable portion of the trade, includ-
6 ing the ocean people, if they had to pay for it.

7 Q. On a technical point, in your system between
8 the locks, I understand you have control valves also, or
9 is it between the locks themselves?

10 A. We have the valves at the locks which
11 control the filling and the emptying of the locks. The
12 reaches have a series of valves, normally adjacent to the
13 locks; but I do not think we have anything that would answer
14 the description as you are giving it at the moment.
15 I do not recognize it as such.

16 Q. Would these valves which you have referred
17 to produce a certain amount of current while in operation?
18 There is some surging at the locks, by reason of the fact that
19 a considerable volume of water is set in motion towards the
20 locks and when the lock becomes filled, the motion is checked
21 and some surge is set up; but I doubt that that is what you
22 have in mind.

23 Q. I was referring to the valves at the
24 approach, near the locks or in the locks.

25 A. Yes. Those create a certain amount of
26 surging. I should say that the method of manipulating and
27 controlling the valves has been very active study practically
28 since the Seaway opened, in an effort to minimize the surging
29 and, at the same time, afford a faster filling and that at
30 the present time is progressing quite favourably and the

1 surges have been reduced by proper manipulation, or somewhat
2 adjusted manipulation of the valve inlets and in that way
3 attempt to dampen off the surge and reduce their effects.

4 Q. Now, you made some comparisons between
5 manoeuvring ocean-going and lake ships. First of all, would
6 you kindly describe whether or not you have any maritime
7 experience as such?

8 A. I have not. I have 27 years on the shore
9 side, on the canals. We do employ master mariners. We have,
10 besides our own tug men, We have master mariners.
11 I should say, in this connection -- may I?

12 Q. Yes.

13 A. I should say that in order to obtain tech-
14 nical personnel familiar with the type of traffic that we
15 meet, we found a great deal of difficulty in finding person-
16 nel who had significant experience on the ocean, as masters,
17 as well as inland as masters, And I should further say that
18 if you approach an ocean master with a question pertaining
19 to inland navigation, he knows far more about it, in his own
20 mind, apparently, than the people who have sailed the lakes
21 all their lives, and, conversely, the inland people are quite
22 knowledgeable about the operation of the ocean ships, which
23 creates some difficulty. I am not being facetious, exactly,
24 but it is true.

25 Conversely, they minimize the difficulties so that
26 we are at some ends, in some straits, to find men experienced
27 in both, particularly in pilotage situations. We finally
28 obtained a person who had experience in all three lines and
29 it has been useful to us in that they can board an ocean
30 ship and they talk the language. He understands them and they



1 understand him. They know the terms and the experience is
2 similar. The only trouble is that we do not live long enough
3 to get all this experience in one person.

4 Q. But would you consider yourself competent
5 to make comparisons between the manoeuvring of lake ships
6 and ocean-going ships?

7 A. From the experience afloat, I would certainly
8 say no; but from the experience ashore, and being responsible
9 for the repair of the enormous number of damages that
10 occurred, due to one specific class of ship as compared to
11 another, I would say that I had a certain, rather a hard
12 school, particularly in the first year or so that the
13 Seaway was open, because we were under considerable strain
14 to keep the system operating, as a matter of fact. And
15 because of this apparent lack of the design characteristics
16 inherent in the ocean ships, as opposed to the inland
17 ships that evolved through the years, and I think the only
18 place in the world where they have, to my knowledge,
19 specifically for inland, or you might say Great Lakes
20 traffic.

21 Q. As far as your experience is concerned,
22 it was always concerned with locks and their restricted
23 waters in between the dikes and the Seaway itself, or the
24 old seaway; is that the case?

25 A. It would be in canal waters and the
26 immediate connecting channels.

27 Q. Yes. In your previous evidence, you
28 referred to the fact that quite normally your contacts
29 officially would be with the master of the ship, as being
30 the man responsible for the ship.



1 A. That is correct. Our stations and our
2 men ashore, in addressing a ship, do so by the name of the
3 ship. The voice that answers, either answering our call
4 or calling initially from the ship, the individual is not
5 known to us, whether he is a pilot, other than that our
6 men may be familiar with the voice itself. There is no
7 distinction. The lockmaster who will require to give some
8 message to the ship from the lock will address the bridge
9 of the ship and the person there takes it. If we have to
10 go aboard a ship, we would of course ask for the master,
11 as requesting permission to board, in the first place, and,
12 secondly, we would consider ourselves, within certain
13 regions, as a guest aboard his ship, as you would in a per-
14 son's home. I should go on a little further, if I may, and
15 say that we do not miss an opportunity when we are aboard
16 a ship where the pilot is there of obtaining from him
17 comments on our system. We welcome them because we realize
18 that they are passing that way much more frequently than
19 the normal captain and are more familiar with the deficiencies.
20 At least, they are more obvious to them than they would
21 probably be to the captain.

22 A. Yes. But as far as telecommunications
23 are concerned, radio or otherwise, unless you know the voice
24 of the man answering, you have no way of finding whether it
25 is the pilot or the master himself answering, or a mate aboard
26 the ship?

27 A. No, we do not. Occasionally the pilot
28 will identify himself. For instance, I am referring to some
29 incident that has occurred within the limits of the dispatch
30 area and a ship may be in difficulty there or it may have had



1 some previous accidents that interferes, or may interfere
2 with the ship, in that the pilots may say that the captain
3 so and so. We do request to communicate directly with the
4 master, but I think it is extremely rare, and it is not a
5 normal thing. We speak with the man who, very frequently,
6 I am sure, is a pilot. We have no reason to lack confidence
7 in pilots.

8 Q. When you have an accident involving
9 Seaway property, I understand you get a report signed by
10 the master; is that the case?

11 A. Yes.

12 Q. When possible, obviously?

13 A. We do.

14 Q. Do you require also pilots to sign that
15 report?

16 A. We welcome, but do not require. I think
17 that stems from the fact that the pilots are not directly
18 responsible to the Seaway for the passage of the ship, as
19 the master is.

20 Q. Does this mean in fact that the pilots are
21 not obliged to sign that report?

22 A. To the best of my knowledge, and certainly
23 I do know that no instructions in that regard have been
24 issued. I do notice that in many of the reports that come
25 in the report is co-signed. It is a common report by the
26 master and by the pilots. I do not know which of them, so to
27 speak, originated the report and which signed it as concurring.
28 I think that is not very often indicated.

29 Our attempt is to find the cause of the accident,
30 while it is fresh in the man's mind, and, with all due respect

1 to the legal fraternity, when he has not been coached.

2 Q. On another point, you refer to linesmen
3 inside the locks and to some instances where the lines might
4 be slack and then the lockmaster might give instructions to
5 the ship to tighten its lines?

6 A. Yes.

7 Q. Can you tell me whether, once a ship is
8 inside the lock, whether that ship can require that the lines
9 be put at a certain place?

10 A. It is normal for the lockmaster to indicate
11 the position of the ship's stem and to choose the location
12 of the lines.

13 If a captain has some particular location, one
14 may think he requires a long lead and some a short lead.
15 Weight is given to that, but the responsibility for the
16 positioning of the lines ashore is with the master of the
17 lock.

18 Q. Would this apply also to the immediate
19 approach to the lock?

20 A. To the approach walls? No. We do not
21 man those locks and the control of the ship there is not
22 within our normal specifications.

23 Q. But would this apply also at the entrance
24 of the lock itself before going to the lock?

25 A. If you mean during the entrance. Where
26 they sometimes carry the lines near the shore and progressively
27 place them on the bollards . . .

28 Q. Yes.

29 A. No. We do not. I should say, perhaps,
30 in that connection that the bollards, as we find them, tend to

1 be too close to the tie-up walls and we have a programme
2 of progressive construction of bollards further back so
3 that a better lead may be obtained, particularly on the
4 ocean ships with the high sides, where the angle of approach
5 is very acute and it is difficult to hold a ship on with
6 an offshore wind.

7 Q. But once a ship is inside the lock, then
8 the setting of the line is under the control of the lock-
9 master?

10 A. Yes.

11 Q. Exclusively?

12 A. With the rider that the wishes of the
13 individual master are acknowledged.

14 Q. Yes.

15 A. It may not be possible to so place the
16 lines without interfering with the following ship for
17 instance; or it is possible that what you have in mind concerns
18 a ship with a very long, raking bow, which are held back
19 in the locks to avoid, as far as possible, the risk of
20 damage to the gate of the installation and one master may
21 wish to approach further in the lock than another. I
22 do not know if that is what you mean.

23

24 -

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R/BL/RPS1

(English)2

Q. When you refer to masters, you also

include masters in every case?

A. The pilot, if the request comes from

the bridge of the ship, we have no specific knowledge

whether it is by the master or not.

Q. That's it. As far as you are concerned,

it is always the master, even though it might be the pilot,

in fact; you don't know?

A. That is right, yes.

Q. I want to refer to dispatching. Now,

when a ship comes up the river and goes directly to the

Seaway, is it dispatched by the Montreal Harbour Authority

first, because I think you said you would get notice of

dispatch from Montreal to your dispatch office in Beauharnois

when a ship is ready for dispatch?

A. We do. As a matter of fact, all ships

approaching there are under the necessity, as I understand

it, because of the health regulations and other things

which necessitate their anchoring in the harbour. In any

event, they are under the control of the harbour, so I don't

think it would be a case where an ocean ship would be

in that position due to the regulations. I am not positive

whether the Seaway, our dispatcher is notified by the harbour

in every case. There would be cases where they would not,

but they would be rare, I would think, and we must know

whether the ship is approaching or not so that we prepare for

it. At one time there was a calling-in point some distance

down the harbour (the distance has been made greater since

then) and the calling-in point was located at the entrance

to the Montreal harbour so we could move these ships, but that



English 1 is not the case now. To the best of my knowledge, there
2 would be some correspondence through the ship's master
3 before entering.

4 Q. And that would apply to inland ships
5 coming up the river and not stopping at Montreal?

6 A. I am not too clear on that particular
7 point. We have to know when they are approaching, and to
8 the best of my knowledge they do not call from down river
9 now to indicate their expected entrance.

10 Q. In cases of bad weather could your
11 dispatching office in the Beauharnois instruct a ship on
12 St. Lambert to clear the entrance to the Seaway, to leave
13 the Seaway, if a ship were to tie up to the approach wall
14 for some reason?

15 A. What you are touching on is of vital
16 interest to us and is very farreaching. We cannot permit
17 a ship to lie in St. Lambert lock, let's say, because of
18 the whims or the considered opinion of an individual
19 ship and thus block all the other 30 odd who are wanting
20 to move at the same time. It is a difficult thing to deal
21 with. What is done is that the master is advised that
22 he cannot remain in the lock. First, he should not have
23 done it and should have made a reconnaissance to see if he
24 could go in, and if he has his own opinion, it is dangerous
25 for him to leave, he would be instructed, first suggest
26 that he obtain tug assistance. If he remains obdurate,
27 he would be advised that he would have to obtain tug
28 assistance and clear the system, without obstructing it.

29 Q. Are you aware of the fact that the Montreal
30 harbour authorities have a similar power concerning ships

2

(R)



English 1 and in particular that they sometimes instruct ships not
2 to come into the harbour that is the purpose of the converse
3 of the operating procedures which we probably haven't
4 touched upon, that when ships are ready to enter the harbour
5 our dispatchers at the various locks advise the harbour
6 of its intentions and they are held. If there is something
7 in the harbour which would mitigate against safety of his
8 passage, he is not permitted to leave until the moment is
9 propitious. What I am touching on at the moment -- presuming
10 there is some large liner which would make it difficult to
11 move in the channel.

12 Q. Have you been made aware of instances
13 where dispatchers at Beauharnois were instructed to appear
14 in the Seaway and dispatchers at the harbour were instructing
15 the ship not to appear in the harbour at all?

16 A. Well, any well run household, and some
17 not so well run, perhaps, have difficulties, and it is
18 sometimes hard to keep the line of demarcation sharp and
19 clear. There are instances where we do know that the harbour-
20 master has talked directly to the ship master, which is not
21 conducive to good co-operation in our opinion. While it
22 has happened with our own men talking to ships in the harbour,
23 certainly we would not permit it. We know of it. Sometimes
24 the ship is taken out of the lock at the entrance wall. If
25 it is there, it is an obstruction in that all the inland-
26 bound ships have to get round it and it makes their landfall
27 more difficult, particularly in wind conditions, and all the
28 other ships attempting to make the passage have difficulty.

29 Q. Are you satisfied with the present co-oper-
30 ation you have between specially dispatching in Montreal



English 1 harbour and the St. Lawrence Seaway Authority?

2 A. It appears to work very well. I don't
3 suppose everything is quite perfect, but we have no specific
4 complaint, other than perhaps the fact that from our
5 standpoint sometimes the dispatcher in the harbour may tend
6 to speak to the ship and request he not move. Our procedure
7 in that case would be for the dispatcher to contact our
8 dispatcher in the normal fashion by land line and tell him
9 he is not prepared to take the ship. That is quite a differ-
10 ent matter.

11 Q. In that case would your dispatcher be
12 advised to the effect that the harbour cannot take the ship?

13 A. If the harbour dispatcher advises:

14 "I cannot take your ship," that would be final,
15 but it is occasionally the case where it is not convenient
16 for the ship to enter the harbour at that time. In that
17 case we would attempt to arrange in some fashion that the ship
18 be allowed to clear the harbour, even though he had to go and
19 anchor at some other place.

20 Q. Yes. I was only concerned about the
21 instructions coming from other places?

22 A. Yes.

23 Q. While I am on the St. Lambert lock question,
24 you referred yesterday to the operations concerning the
25 Victoria bridge, and I understand that when a ship is rising
26 in the lock at St. Lambert the bridge forward of the ship is
27 not opened until the gates are opened at St. Lambert lock.
28 Is that the case?

29 A The bridge and the gates are normally opened
30 approximately at the same time; although there are exceptions



English¹ where the bridge can be taken up and cleared. There is
2 something of the order of two minutes involved in the proc-
3 edure. What I was referring to was the fact that that
4 upper bridge had a few months before been used by the
5 trains out of the Port of Montreal, and the fact that it
6 is used by the large volume of automobile and truck traffic,
7 whereas at that particular moment the ultimate bridge was
8 being used by that.

9 Q. Do you feel that it would be an advantage
10 to raise the bridge at the same time the ship was being
11 raised in the lock. I wonder if it would be worthwhile?
12 I would like to have your views on this.

13 A. We don't normally raise the structure too
14 much in advance of the necessity for it. There is of the
15 order of two minutes involved, and while in general it
16 might be advantageous, there are disadvantages to raising
17 the structure ahead of time.

18 Q. You referred also yesterday to regulations
19 concerning speed and you said the main reason for that
20 rule was in order to provide the orderly arrival at locks.
21 If this is so, is there any particular reason why there is
22 only a maximum speed set and no minimum?

23 A. Well, the minimum is set in the regulation
24 which states that he must proceed -- I have forgotten the
25 terminology, but it means a reasonable speed so as not to
26 delay other traffic. In other words, he couldn't delay in
27 the reaches. I am pointing out a lot of difficulties, but
28 here is one where the master wants to go at three miles an
29 hour as opposed to seven and perhaps his dockage area is not
30 ready or he doesn't want to arrive at his destination until



English 1 a certain time has elapsed. Now, it is rather a simple
2 matter for the master to claim that that is the safest
3 speed for him to travel. We probably know in our own
4 minds that this is not correct, but it is rather a delicate
5 matter to advise the master that he must speed up his
6 ship, but it is done. I think in the future, as traffic
7 becomes more congested, we will simply have to do it to a
8 greater extent than we do now, communicate with the master
9 and say: "You are impeding all the ships ahead of you
10 and also the ships that are tied up in Montreal harbour,"
11 and all the pilots have their schedule arranged to meet
12 a ship at a certain time; the whole thing will be impeded
13 by occurrences of that kind.

14 Q. Do you have a Seaway system of policing
15 the speed of ships in your jurisdiction?

16 A. We check the time of departure and arrival
17 at all the structures, including the bridges, and if a
18 certain ship is known to be liable to either speed or go
19 too slowly, then it gets special attention. We also do conduct
20 various spot checks of the speed of ships, particularly in
21 the Beauharnois area where perhaps the channel is 600 feet
22 wide there and it seems to be unimpeded and there seems to
23 be a tendency to go slowly there and not too quickly. Our
24 early tests showed ships proceeding as much as 17 miles an
25 hour, some somewhat higher, and this can only be considered
26 dangerous by us due to the probability of not only destroying
27 the bridges but also in striking the bridge it might block
28 the channel itself and the 29 ships, say, using that section
29 in that they are difficult to meet and pass and manoeuvre
30 around in the enclosed area.



nglish 1 Q. In the open areas, on Lake St. Louis,
2 for instance, is there any check carried out?

3 A. We do not carry out any investigation there.
4 We know when they leave the anchorage and we know when they
5 arrive at the first calling-in point there which is at the
6 entrance to Beauharnois. So there is a calling-in point,
7 and the thing involved there is that the dispatcher has
8 studied the position of the ships and the numbers of them
9 at the Beauharnois locks, how many are in the upper entrance
10 and how many are in the lower entrance and how many there
11 would be either to moor the ship or tie up at the lock walls;
12 he must know how long they will be, and taking that time
13 and working it backwards to the probable speed of the ship,
14 he then uses that to determine the period in which he will
15 call the ship and request it to come forward from that
16 anchorage. If the ship is too slow or too fast, he either
17 impedes other ships or he is so slow, if he comes slowly,
18 the lock is empty and is not operated during that time it
19 should be operated and no one else can enter that lock.

20 Q. What power or sanction do you have against
21 speeding ships?

22 A. Well, in our function there can be a fine
23 imposed.

24 Q. Up to what amount?

25 A. A thousand dollars, for an incident. We
26 tend to avoid this procedure as much as we can. While the
27 shipping companies and their boards are probably loath to see
28 an item of that nature in their accounts, the amount involved
29 itself is, quite frankly, not commensurate with the advantages
30 which the ship might accrue to itself in arriving at a certain



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(Lalonde)

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English 1 place of delaying for some reason or another, and we use this
2 power as little as we can. We find it better to write to the
3 companies, communicate with the agents, advising them of the
4 situation. There is perhaps some action on behalf of people
5 using the system which estranges them from acting in the
6 matter.

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H/AG/NFS1 However, the most effective thing is to communicate with
English 2 the agent, or the owners, to outline the situation. If
3 the violation is sufficiently bad, either by reason of slow-
4 ness or great speed, we do put a ship to anchor, and since
5 perhaps the conditions at that time are not of the best for
6 a speedy ship, we would have it in our prerogative to hold
7 him 'til it was.

8 Q. You have the power to hold a ship if
9 necessary?

10 A. We we have the power in case in our
11 opinion the conditions are not proper for its advancement.

12
13 I should say that this is used, or can be
14 used, by reason of the fact that the ocean ships particularly
15 tend to be short staffed, both I believe in their officer
16 class and in their seaman class, so that they find it
17 difficult to maintain 24 hour progress through our system,
18 where they must use all their men practically all the time.
19 On several occasions masters and ship's officers have told
20 me that they find it difficult to remain on their feet, so
21 to speak, through the long hours that are required, and they
22 tend, if they were permitted to, to anchor during the night
23 hours, and proceed at daylight. This would be very fine if
24 we were not already occupied by ships who travel by night,
25 and are anxious to travel during daylight hours as well.
26 That has largely disappeared. It is not nearly such a problem
27 as it was, and we are getting excellent co-operation.

28 Q. You refer to bridges. Would you mention
29 the number of bridges there are between Montreal and Kingston
30 crossing the St. Lawrence Seaway itself, and their approximate



1 location?

2 A. I think it is 16, but --- there are 21
3 in the Welland, commencing at St. Lambert, at the St. Lambert
4 end of the lock the first bridge is the Jacques Cartier bridge,
5 which is a high level and immovable bridge. It is not
6 necessary to move it. The ships sail under it. The next
7 is the Victoria bridge, which consists of two bridges actually,
8 the lower and the upper bridges. They are both high level
9 bridges, and they are crossed by railway as well as vehicular
10 traffic. The next is the Champlain bridge, which again is
11 high level, and it is not necessary to move it for the
12 passage of ships. The next is the bridge at Cote Ste.
13 Catherine, which is a bridge in connection with the lock,
14 which is a bascule bridge, a movable bridge. The next is
15 the Mercier bridge, again a high level. The next is the
16 double span, or two spans of the C.P.R. bridge at Caughnawaga.
17 Both of them are vertical lift bridges, and have to be
18 moved for the passage of ships. That takes us to Lake
19 St. Louis. At Beauharnois there is a tunnel under the lock
20 which serves as a bridge. There is also there another rail-
21 way bridge, used to a certain extent for vehicular traffic,
22 immediately upstream from the upper Beauharnois lock. The
23 next is the St. Louis bridge, which is a vertical lift bridge
24 across the Beauharnois Canal, not only the navigation system,
25 but the power canal. The Valleyfield bridge, another vertical
26 lift bridge which has to be moved for the passage of traffic.
27 The next would be the high level bridge at the Cornwall area,
28 just downstream from the Snell lock in the international channel.
29 That is also a high level bridge that it is not necessary to
30 move. The next bridge is at Iroquois lock, where there is a



1 bascule bridge, again movable, across the lower entrance
2 of the lock, providing access to the Point Rockway dam,
3 or the Iroquois dam as it is called. The next would be
4 the Seaway Skyline bridge at Johnstown, immediately down-
5 stream from Prescott, which is also called the Ogdensburg
6 bridge, and is high level. The next would be the Thousand
7 Islands bridge, which is not on this sheet, and that would
8 take us to Lake Ontario.

9 THE CHAIRMAN: We will adjourn for the lunch
10 period, and the hearing will be resumed at 2:30.

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12
13 ---AT 1:00 P.M. THE HEARING WAS ADJOURNED UNTIL 2:30 P.M.

14
15
16
17 N O T E :

18 Page No. 4414 follows.
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1 ---On commencing at 2:30 p.m.

2 MR. JACQUES: With your lordship's permission,
3 I should like to interrupt the evidence of Mr. Burnside,
4 in order to hear the Engineer from the Department of
5 Public Works from Ottawa. This gentleman has to return
6 to Ottawa, without failure, this afternoon.

7
8 PAUL WILBUR WALTERS, sworn:

9
10 DIRECT EXAMINATION BY MR. JACQUES:

11
12 Q. Would you state your full name and age,
13 please?

14 A. My full name is Paul Wilbur Walters,
15 age 51.

16 Q. What is your occupation?

17 A. I am a civil servant with the Department
18 of Public Works.

19 Q. How long have you been with the Depart-
20 ment of Public works?

21 A. I have been with the Department of
22 Public Works for seven years.

23 Q. Do you hold any degree as engineer?

24 A. Yes. I have a Bachelor of Applied
25 Science in Engineering from the University of Toronto,
26 in civil engineering.

27 Q. When did you obtain that degree?

28 A. In 1934.

29 Q. You are attached to the Ottawa office
30 of the Department of Public Works?



1 A. I am a District Engineer. I am executive
2 head of the District Office.

3 Q. Would you state the limits of your
4 district?

5 A. Starting on the east, along the St
6 Lawrence River, it stretches from the Quebec boundary as
7 far as Brighton, Ontario --- on Lake Ontario.

8 Q. More precisely...?

9 A. I would like to show you on this map.
10 Starting on the east, at the Quebec boundary, coming along
11 the St. Lawrence and Lake Ontario to Brighton, Ontario.

12 Q. So, it would include --- it would start
13 approximately at Cornwall?

14 A. That is correct.

15 Q. And would include Kingston?

16 A. That is correct.

17 Q. And a portion of Lake Ontario, as far as
18 Trenton?

19 A. That is correct.

20 Q. Thank you. Now, in that section of your
21 district, extending from the boundary of the Province of
22 Quebec to Kingston, would you tell the Commission whether
23 any silting takes place?

24 A. In the sense of deep navigation, I
25 would say there is little or no silting. The only
26 silting that is prevalent is around Prince Edward,
27 probably between Wellington and Point Petrie. This
28 would only be of interest to shallow-draught vessels.
29 So I would say that, for practical purposes, in the sense
30 of deep-draught vessels there is no silting in this area.



1 Q. There is no silting which would affect
2 deep-draught navigation?

3 A. That is correct.

4 Q. Do you have any problem of erosion caused
5 by speeding vessels within narrow waters within your
6 district?

7 A. I would think the answer would be yes
8 with respect to small boats and no, with respect to large
9 boats.

10 Q. Has your Department, your own office
11 carried on any survey of currents within your district,
12 within the last five years.

13 A. No. Generally that is done by the
14 Hydrographic Service or the Department of Northern Affairs,
15 Water Resources Branch. We do soundings, but seldom do
16 we do extreme measurement or the measurement of currents.

17 Q. You said that you did soundings. Do you
18 do sounding throughout your district regularly?

19 A. Yes, we do.

20 Q. When do you do those soundings?

21 A. This is done, normally, before and
22 after and during a dredging contract, to determine the
23 quantities of material to be dredged and the amount of
24 dredging and the depth of water after the dredging is
25 completed.

26 Q. But apart from those soundings, would
27 you take any soundings in your district as a matter of
28 routine?

29 A. We recently acquired a certain launch
30 which was commissioned and is based in Kingston, in

1 Cataraqui. I hope shortly we will do some planning with
2 Cataraqui. Previously we just worked on the contracts
3 as they developed.

4 Q. Now, those soundings, do you communicate
5 them to the Department of Transport?

6 A. Yes. The practice is when we finish
7 dredging we send this information to the Dominion Hydro-
8 grapher in the Department of Mines and Technical Surveys,
9 who produce the hydrographic charts and we also advise
10 Transport for the notices to mariners.

11 Q. Would you supply this information
12 directly to pilots?

13 A. The information is supplied to them
14 through the Canadian Hydrographic Service in the form of
15 a chart when the notices to the mariners have been
16 issued by Transport. We supply the information to the
17 Canadian Hydrographic Service in the Department of
18 Transport and they make the distribution directly to the
19 vessels in other units.

20 Q. To the best of your recollection,
21 have you ever had requests from pilots for soundings in
22 any particular area?

23 A. As far as I am personally concerned,
24 I would say no. Generally we get requests from the
25 municipalities or others interested in a particular
26 location. We normally investigate such requests.

27 Q. You normally investigate them?

28 A That is correct.

29 Q. Have you ever received any request
30 from shipowners or organizations representing shipowners

1 for soundings?

2 A. Yes and normally this ends up in the
3 chart which I refer them to the Canadian Hydrographic
4 Service for the chart.

5 Q. So, you never supply information
6 directly to people who would request it; you would refer
7 their request to the Hydrographic Office?

8 A. Normally, we deal with the Canadian
9 Hydrographic Service.

10 Q Is there any particular objection to
11 your supplying this information directly to people
12 requesting it?

13 A. If someone, say, came in and made a
14 special trip into our office and we had the information
15 available, we would certainly give it to them.

16 Q. Prior to having one survey boat assigned
17 to your district, what did you have to carry out
18 sounding surveys?

19 A. We had echo-sounding equipment, but
20 had to rent boats in the area and we put our own equipment
21 on those boats and used them on a rental basis for the
22 days required for that particular survey.

23 Q Would you tell us more about this sound-
24 ing equipment that you have; is that equipment similar
25 to the echo-sounders which are found on Canadian ships?

26 A. Yes. It is an echo-sounder similar
27 to what the Canadian Hydrographic Service use for their
28 charting.

29 MR. JACQUES: Thank you, sir. Your witness.

30 MR. LALONDE: No questions, my lord.

1 CROSS-EXAMINATION BY MR. LANGLOIS:

2

3 Q. Mr. Walters, I understand that you take
4 soundings only when you are about to do some dredging
5 work or after the dredging has been done?

6 A. That is normally correct.

7 Q. Then in this case am I not safe in
8 assuming that any information would be of very little
9 use to mariners?

10 A. Yes. If this resulted in a chart which
11 the Canadian Hydrographic Service issues or Transport may,
12 in the form of a patch to the insert in the notice to
13 mariners.

14 Q. Am I not correct in assuming also that
15 you carry out these sounding tests only on receipt of
16 complaints that the water, the depth of the water has
17 increased?

18 A. Not necessarily. Or someone might want
19 to bring a vessel of deeper draught into a particular
20 harbour.

21 Q. But you do use soundings only on
22 request?

23 A. Yes. Or, as part of an overall plan
24 of developing a particular harbour or an approach to
25 that harbour.

26 Q. But you have no periddical or routine
27 soundings taken just to make sure, for instance, that
28 there is no silting?

29 A. No, not as such. That is quite true.

30 Q. Very good, thank you.



1 RE-DIRECT EXAMINATION BY MR. JACQUES:

2

3 Q. fo follow up the last question, has
4 your experience shown that it would be necessary to carry
5 out periodical soundings?

6 A. With the new boat, we plan to have an
7 overall program where depths of channels in the lake can
8 be checked regularly. Normally we are dependent now on
9 the Department of Transport or some shipper saying a
10 channel is such and such a depth and is inadequate,
11 before we check.

12 Q. On what did you base your statement
13 that there was no silting taking place within your
14 district, if periodical soundings were not carried?

15 A. What I meant by that was this: That
16 normally we are merely the construction agency of the
17 Department of Transport. The Department of Transport
18 is the administrative authority and this would tend to
19 be brought to the attention of the District Marine
20 Agent, Mr. Barrick, or in my case, Prescott. Now, he
21 and Mr. Land have sweeping equipment and normally
22 they would do the sweeping to determine what the depth
23 was.

24 Q. To the best of your knowledge, when
25 was the last sweeping carried out in the stretch
26 between Cornwall and Kingston?

27 A. At my request, there was a sweep made
28 about two weeks ago in Cornwall Harbour, by Mr. Mike
29 McDonald.

30 Q. And the rest?

1 A. And the harbour was resurveyed by the
2 Canadian Hydrographic and a chart is now being prepared.

3 Q. That is for Cornwall?

4 A. That is for Cornwall.

5 Q. What about the rest of the stretch
6 between Cornwall and Kingston?

7 A. The main system is not our responsibility.
8 Normally, our responsibility is coming from the main
9 system into non-commissioned harbours and the approach
10 to non-commissioned harbours.

11 MR. JACQUES: I see. Thank you, sir.

12 THE CHAIRMAN: No further questions.

13 MR. JACQUES: Thank you very much for coming,
14 sir.

15
16 MR. BURNSIDE, recalled:

17
18 CROSS-EXAMINATION BY MR. LALONDE (Continued):

19
20 Q. Mr. Burnside, yesterday you stated
21 that you carried on inspections of the ships and that
22 in addition the pilots who would find that a ship is
23 not properly equipped, in their opinion, to pass through
24 the Seaway system, should decline to take a ship? I think
25 I am quoting you when I am saying this. Is this a fair
26 statement of what you said yesterday?

27 A. I was referring to the condition of the
28 ship with respect to its navigation ability, with
29 particular reference, as I recall, to the ballast
30 condition of the ship. If it was in light ballast, it



1 might not be safe, in the opinion in this case of the pilot,
2 shall we say --- that it was too lightly ballasted and
3 exposed too much windage, to an adverse wind conditon,
4 that it would be advantageous to ourselves particularly,
5 as well as the rest of them, if he would at that time
6 signify so.

7 Q. Do you have any regulation in the
8 Seaway requiring ships to have a minimum ballast?

9 A. Our regulations state, in effect, that
10 the ship must be ballasted in a condition satisfactory to
11 the Seaway. It is extremely difficult to define the
12 ballast betseen the condition of ships. They vary so
13 widely. Some ships have tanks that will assist in their
14 ballasting and some have not, and it would be a matter,
15 with some ships, of refusing entry antirely if they were
16 riding too high, shall we say.

17 Q Are you aware of a notice to mariners
18 concerning the harbour of Toronto in which it is stated
19 that ships, I think loading scrap metal in the channel
20 in Toronto, might be ordered to come to anchor if they
21 have less than 15 foot ballast --- draught?

22 A. No. I wasn't familiar with that.

23 Q. Has the St. Lawrence Seaway given consi-
24 deration to passing a regulation which would impose a
25 minimum draught?

26 A. We have considered the draught problem
27 and in the course of these considerations have explored
28 the possibility of setting some limiting minimum draught;
29 but as far as we were concerned, we found it impossible
30 to define it in such a manner that it would fit the various

1 conditions that might arise and we were constrained to
 2 write the regulations to the effect that this must be
 3 satisfactory.

4 Q. In connection with your statement that
 5 the pilot should decline taking the ship in in circum-
 6 stances where you feel it is not properly equipped
 7 to proceed through the Seaway, are you aware that under
 8 the present state of the law the pilots are not entitled
 9 to refuse taking such a ship on such grounds, on the
 10 basis that the master of the ship is the one to decide
 11 whether or not he should proceed?

12 A. I am aware that it is the master's
 13 prerogative and duty to determine, to his satisfaction,
 14 whether a ship is able to proceed. But we have a
 15 conflict of interests in that a captain of an individual
 16 ship may be prepared to take some --- perhaps a greater
 17 risk with respect to tying up the St. Lawrence Seaway
 18 than we would be willing to have him accept, having in
 19 mind the interests of other users. What I had in mind,
 20 if I may enlarge on this just for a moment, is that the
 21 pilot, as he boards the ship, it would be of great
 22 assistance to us if in the case we mentioned, that he
 23 found the wind to be excessive or the safe passage of
 24 that ship in the condition of ballast, if he would tell
 25 us so, that we would use our influence, shall we say,
 26 with the master, which might include --- in fact it
 27 sometimes does include --- instructing him not to proceed,
 28 or refusing to take him at that time until the wind
 29 abates. That is what I had in mind.

30 Q. Thank you. Moreover, I think I have



(English) misstated the law. In effect, Section 329 of the Act
2 says that the pilot can refuse to pilot a ship when there
3 is reasonable ground that the danger of the ship ---
4 However, I understand you must realize the difficult
5 situation in which the pilot might be --- and a master,
6 for that matter --- as to assessing what is a reasonable
7 ground of danger to the ship. One man's view might vary
8 from another man in that respect. You know that?

9 A. Yes. But it is necessary to protect
10 the other users of the system from, perhaps, a hurried
11 and over-anxious opinion of a master to go on, for the
12 purposes of his own ship and perhaps unduly, in our
13 opinion, risk the safety of the system. A tie-by of a
14 few hours might rectify the situation
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1 You stated that the maximum draught has been
2 increased to 25 feet six inches last year or this year.

3 A. At the beginning of navigation this
4 year.

5 Q. Has the level of the water been maintained
6 at the same level as it was in the previous years this
7 year?

8 A. This year is a low water year. Using
9 the term "low water," it refers to the amount of water
10 that is presently entering the Great Lakes system. The
11 term low water in that case does not mean that the
12 elevation of the water at any particular point is
13 necessarily lower than at any particular time, but the
14 supply of water in this year, 1963, and somewhat in
15 1962, is at a stage, at the minimum stage similar to that
16 in 1933 and 1934, when there was a low water year, that
17 is a low supply water year. The term low doesn't
18 necessarily indicate that the level will be at a lesser
19 level than any other.

20 Q. Would it mean that the under-keel
21 clearance in the system would remain the same this year
22 as in the previous years, considering that it would have
23 been, for instance, 25 feet six inches all the time?

24 A. This entails a variety of situations.
25 You may have conditions where the water level is at a
26 lesser elevation during a high flow period in certain
27 sections than it is in the low flow sections, a small
28 flow year, so you cannot assume the water in the different
29 reaches this year will be at a lesser stage than it may
30 be in another year.



1 The most critical as far as the Seaway is
2 concerned and probably the first to be affected would
3 be Lake St. Louis, but other factors affect it at that
4 site. So this year there is not, in fact, a lesser
5 amount of water flow than it was last year, for instance.

6 Q. Have you made any survey in that
7 regard?

8 A. Yes. We are continually carrying on
9 investigation of the water level.

10 Q. Was there any study made of the squat
11 effect situation due to the increase in the maximum
12 draught allowed with ships in the Seaway?

13 A. The question of squat was given very
14 close attention. In our search of the records the
15 actual measurement of the squat under working conditions
16 is at a minimum, apparently, throughout the world. There
17 hasn't been too much done on this. So while there have
18 been modest studies, quite extensive studies which
19 indicate certain amounts of squat under certain
20 conditions, it hasn't been carried on to the extent you
21 might expect in full-sized ships under normal navigating
22 conditions. The information that we are able to
23 obtain is rather limited in that regard.

24 Q. Has the Seaway Authority carried out
25 any study itself in that regard?

26 A. Not as such, no, not to my knowledge.

27 Q. Would the squat effect have been
28 increased by the increase in the maximum draught allowed?

29 A. That is not an easy answer to give.
30 This does not allow a simple answer, sir. If we could



1 assume that the bed of the channel was a wide area similar
2 to this courthouse, something of considerable extent, or
3 say, a quarter of a mile wide, contrasted with something
4 five or six miles wide, so as the draught increases, so
5 does the squat increase. So the difficulty which would
6 exist probably in a small sand spot or a boulder which
7 may protrude, I think the squat on a large ship would not
8 be affected by that increased draught. It would be
9 affected if the area were of a greater extent. The
10 shallower the depth, the greater the squat, the narrower
11 the channel, the greater the squat. A ship passing from
12 a wide channel to a shallower channel, the squat tends
13 to increase. But the problem with which we are faced
14 is not materially affected by the six inches difference.
15 There would come a time, if you carried this to its
16 ultimate conclusion, where a ship would pass safely, I
17 think, at 25 feet, where it would not pass safely at
18 25 feet six inches. But we are not in that condition.

19 Q. You said you are not in that condition.
20 On what basis?

21 A. Well, I would say that the practical
22 measurement of squat under operating conditions does
23 not exist extensively, we can't find them.

24 If we return to the Welland, they operated
25 for many years with a difference in depth and squat
26 of the order of 18 inches, we would have perhaps as
27 practical a test as we could apply; and throughout the
28 period before the present deepening of the Welland
29 Canal, ships operated there with an 18 inch difference
30 between the permissible draught and the controlling depth



1 without difficulty. In the time that the Seaway has been
2 in operation we have had no instance to my knowledge in
3 the official records certainly of a ship grounding in the
4 channel due to squat. While it is possible for a boulder
5 to roll under and touch a ship at 25 feet six inches and
6 not at 25 feet, squat is not a factor there, because
7 this would not cause it to squat. We have not so far had
8 and difficulty in the ships loading to the limit. Our
9 difficulty is perhaps on the side of the fact that the
10 people who are operating the ships are a little anxious
11 to take advantage of this and to overload. We have
12 to watch the loading factor and keep them within the
13 limit specified.

14 Q. Assuming there have been no accidents
15 lately due to increase in draught, is it not a fact also
16 that all the similar conditions, if you increased the
17 draught, there would be somewhat of an increase in the
18 squat under the same conditions?

19 A. I don't know that we have sufficient
20 information to state a categorical reply to that. I
21 would say that the ship is more likely to ground the
22 deeper it is loaded, and I don't wish to go into it
23 any further.

24 Q. About representations or consultations
25 with pilots concerning improvements in the St. Lawrence
26 Seaway, you mentioned that you wished to have as much
27 contact as possible, and if you went on board ships you
28 would consult the pilot if he was there. Are you
29 aware of a series of recommendations made by the pilots
30 operating in the Seaway for improvements of operation

1 after the first year it was in operation, around 1959,
 2 a report or long letter which had been sent, including
 3 a series of recommendations concerning approach walls
 4 and various other factors? Have you ever taken notice
 5 of that?

6 A. As I recall, one of the items brought
 7 forward through letters, I believe, to our districts
 8 from the pilots entailed the improvement of the entrance
 9 walls by placing timber fenders along their faces. Now,
 10 that was in conjunction with others, the pilots were
 11 not alone in this matter, and as a result of all these
 12 recommendations and our own observations, the walls have
 13 now been fitted throughout with timber fenders, where
 14 necessary with rubber buffers, and it has been, I am
 15 sure, an improvement.

16 Q. But you have been aware of that letter
 17 sent by the pilots in that respect?

18 A. I recall that the pilots had recommended
 19 I don't recall this specific letter.

20 Q. Are you aware also from these other
 21 meetings with some of your officials, like Mr. McKenzie,
 22 for instance, concerning other improvements in the
 23 Seaway operation?

24 A. I know that there have been discussions
 25 of various things, one of them entailing the method of
 26 reporting, I think, the nature of the pilots' require-
 27 ments, and this was in conjunction, as I recall, with
 28 some officials of the Montreal Harbour as well and the
 29 pilotage authorities whereby the method of reporting
 30 the ships was discussed at quite considerable length,

1 and we changed our method of reporting to fit the
 2 consensus of opinion and altered it repeatedly until
 3 we got it as good, I think, as we could get it at that
 4 time. And the latest thing I recall in that connection
 5 was the recommendation --- I am not sure that it was
 6 from the pilots; I think in my mind that it was --- that
 7 the pilotage people equip their office with a radio-
 8 telephone communication system, so that they could directly
 9 receive the request of the pilots from the ship's master,
 10 and by doing so they could avoid confusion in the case
 11 of a master proceeding through the port and having his
 12 orders changed suddenly as people would decide that he
 13 should go to the port of Montreal rather than the river,
 14 and then our system the word would go at the next lock,
 15 but with this improved or supposedly improved system,
 16 he would get the word directly. It seems an improvement.
 17 I don't know whether it has been put into effect or not.
 18 It would seem advisable, but we are cooperating in that
 19 matter.

20 Q. Is it a fact that all representations
 21 made by representatives of pilots will not necessarily
 22 be brought to your attention?

23 A. That is probably true in detail, but it
 24 is certainly not true in the general context. We receive
 25 a great many different requests. I know in talking to
 26 Dominion Marine Association, who represent the inland
 27 people, as individuals the masters of the Dominion
 28 Marine Association, there are forty of them and you may
 29 get thirty different answers; and the same is true with
 30 the Shipping Federation, that the individuals are not



1 necessarily agreed in themselves. What we get as far
2 as we can is the consensus of opinion. When they bring
3 their collective knowledge to bear and present it in that
4 way, it is better.

5 Q. Now, have you been made aware of a
6 request by pilots for proper accommodation at St. Lambert?

7 A. We have had the matter of accommodation
8 of pilots at Lambert Lock under discussion almost from
9 the moment we opened, and we have had various suggestions
10 to make. One was that there should be a building
11 erected there as a shelter for pilots. For instance, it
12 is to our advantage in that our quarters are very limited.
13 As a matter of fact, we haven't room to accommodate
14 them properly and we wish that some more extensive pro-
15 vision be made, and I think the latest that I recall is
16 that a building will be erected on the southerly side
17 of the lock. The pilots, I understand, having been
18 talking to some of them, some wanted it on one side and
19 some on the other side, so I think they came to the
20 conclusion that it would be on the south side.

21 If I may go on for a second here, some kind
22 of dispatching may be done there. From our standpoint
23 it may be better there to facilitate the arrival of
24 pilots and obviate the occasion when a pilot may
25 perhaps not arrive to meet the ship more promptly
26 than he had intended, and he may have been delayed, and
27 if there could be some provision made whereby the
28 active duty pilot on the ship could take that ship to a
29 safe anchorage or take it out of the lock, to be met by
30 another pilot, rather than have the vessel sit in the lock

1 and not block traffic would be, from our standpoint, an
 2 advantage. It doesn't frequently happen, but occasionally
 3 it happens that a pilot is delayed, and therefore the ship
 4 is delayed, and to have a provision whereby the pilot on
 5 duty would take the ship clear up our confined channels
 6 so that the other ships could pass, would be of great
 7 assistance to us.

8 Q You don't know the cause of such
 9 delays yourself, do you?

10 A One to which I could refer was that the
 11 pilot was not there. The recent one which comes to mind
 12 was listed as 32 minutes for something like four ships.
 13 Now, that is fine as far as it goes, but those would
 14 be four ships in the immediate confines of the lock,
 15 perhaps two upbound and two downbound, but all the
 16 ships that might be waiting at that time in the Montraal
 17 Harbour and the ships downbound would also be delayed,
 18 so for that reason we hope something could be done.

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CC/AG/RPS

Q. But you wouldn't know yourself whether

English the cause of the delay was because the pilot was not given
notice in time, or the ship gave notice too late, or because
the pilot took too long to get there? You only see the
fact that there are some delays in time?

A. If our officer making the report knew
that there had been a wrong request, or a changed request,
or a mixup in the request, it would be listed on the report
normally, but we would not of necessity know.

Q. Because the request is sent to the
pilotage office, and not to you for pilots?

A. The request is sent from our lock
operators to the pilotage, at the request of the master.

Q. Would the Seaway Authority have any
objection to the construction of pilots' accommodation on
the Seaway property at the St. Lambert lock itself?

A. No, we would only wish that it would be
in conformity with the buildings that are there. We would
welcome any addition of that order, which might improve
conditions.

THE CHAIRMAN: We will recess now, just for
five minutes.

---A SHORT RECESS.

MR. LALONDE: Will the Commission suffer from
the temporary absence of Commission Counsel, or shall we
proceed?

THE CHAIRMAN: All right. Proceed.

Q. You stated this morning that after having



English 1 considered that there would be an additional cost in the
2 service of linesmen at the approach walls, the Shipping
3 Federation of Canada concluded that it was not in favour
4 of such a proposal?

5 A. I said, as I recall, that we got uniformity
6 of an affirmative reply towards the desirability of placing
7 the men there, but no uniformity of assent if the cost
8 would have to be distributed among the various members.

9 Q. Have you made any study as to the actual
10 additional cost that would represent?

11 A. Yes we did, and the figure escapes me.
12 I would not wish to give it without some review.

13 Q. What would that have entailed? Is it two
14 or more men per approach wall, or --

15 A. It would amount to this, that we would
16 have to man the walls so that a ship, depending on their
17 assistance, would be assured that the assistance would be
18 there for them at the time, and while it was suggested
19 at various times that we might at one lock move the lines-
20 men from the upper part of the lock to the lower part of
21 the lock to meet the demand, there are many occasions when
22 ships might be at both ends simultaneously, and by very
23 reason of the fact that they were depending on these linesmen
24 it might create very considerably added hazard if they were
25 not there.

26 MR. LALONDE: Would the Commission be interested
27 in obtaining the forecast that the cost of this proposal would
28 have represented?

29 MR. BRISSET: I have the figure my lord.

30 MR. LALONDE: Would you mind making it available?



English

MR. BRISSET: Yes. I am informed, my lord, that

the figure quoted was six hundred thousand dollars.

MR. JACQUES: Per year?

MR. BRISSET: Per season.

Q. And that would have been for the whole
Seaway system?

A. Including the Welland, and the American
section, as I recall it.

Q. Well, at any rate since you are likely to
be recalled before this Commission, you might in the mean-
time check this matter, and inform the Commission if this
figure is still the same?

A. Yes.

CROSS-EXAMINATION BY MR. LANGLOIS:

Q. Mr. Burnside, if I understood you correctly
this morning, or rather yesterday I should say, you stated
that pilots had been of enormous assistance in keeping the
St. Lawrence Seaway in use in the early stages of the period
immediately followed the opening, and you also stated that
masters were different.

Did you mean that the masters were changing from
voyage to voyage or trip to trip, that you had different
masters?

A. Yes, I was implying that the pilots were
building up experience more rapidly than the individual
captains, that is experience with inland navigation more
rapidly than the individual captains, because of more frequent
repetition.

A. When you state that the pilots have been of



English 1 enormous assistance, does that apply to ocean ships, and
2 to lake vessels as well?

3 A. I was speaking at the time with respect
4 to ocean ships. The assistance or otherwise with respect
5 to the inland ships, frankly is not apparent to us.

6 Q. But in the early stage of the first years
7 of operation of the Seaway you didn't have the large lake
8 vessels that we have now?

9 A. Not quite as large. We had those that were
10 known then as the upper lakers, who were too large to come
11 down through the whole St. Lawrence system, the 14-foot
12 navigation, but we had the large ships plying through the
13 Welland Canal, something of the order of 700 feet, 690.
14 We didn't have them up to the 730 that we have now.

15 Q. In relation to speed in the Seaway,
16 permitted speed in the Seaway, was this speed, these speed
17 limits, set having in mind the fact that some ships have
18 no slow speed, meaning by that that some ships can't go at
19 less than six or seven knots, even going at slow speed ahead?

20 A. We set the limits having in mind the
21 conditions as they existed, and we were aware that some
22 ships weren't geared to too high, or whatever term you wish
23 to use, so that it was more difficult for them to maintain
24 a slow speed than others. The naval ships, to quote one, find
25 it difficult to maintain canalizing speed, and must throw their
26 engines on and off to maintain navigable speed at all.

27 We quite realized that there were certain vessels
28 that might find it more difficult to maintain those speeds
29 by reason of the speed of their engines I believe, rather than
30 their manoeuvrability.



English

Q. So would you agree that with such ships, with practically no slow speed, that there are greater hazards in negotiating your locks, and that they would require more skill on the part of the master or the pilot in charge?

A. I would certainly say that a ship that could not proceed at a speed of the order of two or three miles per hour in entering the lock would be more hazardous than one that could proceed at that speed. Walking speed coming into a lock structure is much too fast.

Q. Would you be prepared to say also, having in mind your experience so far, that some of the mishaps which took place in entering your locks were due to the fact that at least some of these ships, or the ships involved, had no slow speed?

A. I don't know that I could quote any specific example, sir, but we were quite aware that from our standpoint, the ships failed to come in at a proper speed. They tended to approach the structure at a speed which was suddenly reduced, and whether their bow wave caused them to go out of control, I don't know, but they ended up by coming in too slowly, and when they reached the entrance gates they would yaw, and were more inclined to strike the gates. They were not designed for that particular business.

Q. Is it not a fact also that this class of ships at slow speed would require not only more skill on the part of the man in charge of the navigation or handling of the ship, but also more skill from your own linesmen in handling the lines of that ship as she comes in? She is coming in with much more headway than she would



English 1 normally?

2 A. I would agree with that to a point. I would
3 say though that a ship coming in at excess speed, as you
4 describe it, would be a hazard with which we should not be
5 forced to have, because he should check her down in time
6 to avoid this situation, because as he is in the lock his
7 speed is no longer necessary for steerage, because he is
8 within the confines of the lock, and it should be checked,
9 and not depend on the lines alone, because it is extremely
10 difficult for the lines to be brought to bear simultaneously,
11 instead of having them one at a time, which results in
12 snapped lines. As each one bears it snaps, and this entails
13 the skill of the operators aboard the ship, as well as the
14 ones ashore, that the lines should bear uniformly, or the
15 winches should be so equipped as to slip at a certain load,
16 and when their maximum slippage was reached they would
17 continue to retard the ship, but the strength of the lines
18 would not be exceeded, and they would not break.

19 Q. I am keeping in mind the fact that you
20 stated this morning that you have no sea experience, and
21 therefore you don't have to answer the following question,
22 but would you be prepared to agree that a ship of this
23 class even if she has a good deal of headway, won't steer
24 as well in confined waters, where there is very little water
25 left under her keel, with her engine shut off, as she would
26 if she could keep her engines on?

27 A. I think that is true, but I should also say
28 that the rudders of the ships of which you are speaking are
29 probably much smaller in comparison with the size of the ship
30 than the inland ships, or the ships designed for the business.



English 1 There is another factor, that the water is
2 deeper in the immediate lock area. There is 30 feet of
3 water over the sills, rather than the 27 feet limiting
4 depth, so the water tends to be a little deeper in the
5 immediate confines of the lock, and the variations, or the
6 unsatisfactory effect of a sudden stoppage of the speed
7 of the ship is somewhat mitigated by the fact that the
8 water is deeper.

9 Q. But is it not a fact that a ship going
10 ahead in shallow water will draw the water with her,
11 creating a vacuum, and relieving the pressure on her
12 rudder?

13 A. This is apparently correct, when it comes
14 close to the bank that the ship sucks the banks, because
15 the water between the ship and the bank is travelling more
16 quickly, and the water surface drops. The ship is actually
17 forced close to the bank the closer she comes to it,
18 apparently.

19 Q. If a ship is doing what is normally called,
20 in the language of the men of the sea, that the ship is
21 feeling the bottom?

22 A. I would be forced to agree by observation
23 sir, but not my own experience. You will understand that.

24 Q. Very well. Now, in your Exhibit No. 473
25 you show the cost of some of the mishaps, and I will run over
26 it. This was made clear yesterday, but I would like you to
27 tell the Commission if these costs are determined after a
28 thorough investigation of the circumstances of the accident,
29 in getting information, not only from the master, but also
30 from the pilot, if there is a pilot on board?



English 1 A. The information that is contained in the
2 statement to which you refer is compiled from the reports
3 which are received from the District, originating with our
4 closest officer to the site, coming up through the Canal
5 Superintendents and the District Managers, after review.

6 The pilots, sir, are not individually interrog-
7 ated, I think, as such. They are present during the
8 interrogation of the captain, I am sure, and their opinions
9 are frequently observed, but we don't, I will make this
10 clear, it is probably a fault, but we don't specifically
11 ask the pilot as to his opinion of the cause of the accident.

12 Q. The next question then will be has it
13 been brought to your knowledge that the investigating officer
14 has discovered that the master had a different story to tell
15 than that of the pilot, or vice versa?

16 A. We are aware that there are differences
17 of opinion. This would arise particularly when the owner,
18 supported perhaps by the master, might be attempting to show
19 that there was something faulty with the conning of the ship,
20 or the orders given by the pilot, or some conflict of interest
21 in that regard.

22 Q. Then you have also the human nature is always
23 there. When you can blame somebody else for your own action,
24 well sometimes it is a handy escape from responsibility?

25 A. That is quite correct I expect.

26 Q. In this Exhibit No. 473, in this column
27 headed "submitted amount of Damages", am I right in assuming
28 that this refers to the damage to the Seaway installation only,
29 and not to the vessel?

30 A. It has no reference to the damage to the



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TORONTO, ONTARIO

Burnside, cr.ex.
(Langlois)

4441

English 1 vessel, or to anything other than the Seaway installations,
2 or our own equipment.
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English 1 Q. Now, in comparing this Exhibit 473 with
2 Exhibit 474 -- I do not know if you have them in front of
3 you, sir?

4 A. I have the list of the accidents to which
5 you refer.

6 Q. This is "Delays to Navigation, Welland
7 Canal 1955-1962."

8 A. I had only one copy with me of that.

9 Q. You have here four different categories:
10 Equipment, obstruction, vessel and weather. I would like
11 you to tell the Commission, in the case of an accident due to
12 the ship having been blown away by a violent storm or a high
13 wind, if you would classify this accident as being due to
14 weather or to the vessel?

15 A. Normally, that would be an incident that
16 happened to the ship. If it crashes a lock gate during an
17 excessive wind, that would be listed under "Vessel". The
18 items marked "Weather" would include such items as fog, a
19 wind of such intensity that navigation was halted, poor
20 visibility -- I do not recall at the moment anything of the
21 ice situation, but it occasionally occurs. That would be a
22 weather situation and I am not attempting to divide the accident
23 between its basic cause, necessarily, and the cause of the
24 weather.

25 MR. LANGLOIS: My lord, the reason I am asking
26 this question is because a glance through Exhibit 473 indicates
27 that several causes of these accidents are given. For example,
28 there is the accident of the
29 where the cause is indicated, in Exhibit 473 as "Vessel" fell
30

1 down in violent squall."

2 Q. In the same Exhibit 473, I noted that there
3 was a slight damage caused to your lock installation by the

4 . Is it not a fact that the
5 is an extraordinarily large vessel that probably was too
6 big for your locks?

7 A. I don't recall the dimensions of that
8 ship. I do recall one ferry ship had protruding decks did
9 downbound damage to iron railings on the decks. I do not
10 know whether this is the same item or not. We would not,
11 knowingly, permit the ship entry that was over-sized.

12 Q. Would it help you if I told you that the
13 Pere Nouvel was the ~~vorner~~ Vacationland which was plying--
14 which was owned by the State of Michigan and plying the
15 Mackinac Strait?

16 A. I think that I recall this incident and
17 I am quite sure that it involved the protruding decks to
18 which I referred. They were so wide that as the ship was
19 lowered in the lock, she bore on the side of the locks,
20 on one side, not because she was too big but because the
21 protrusion of the deck was so large that she did come down
22 on the top of the edge of the deck. I also recall one
23 incident, and this may well be it, where we fendered a ship
24 or had them fender the ship to minimize the damage. There
25 was one occasion where the ship came through and damaged
26 several locks.

27 This entails the physical question of what are
28 you going to do with the ships? We have no place to put
29 them. We can't stand them aside because there are no
30

1 lie-bys. In the Welland, for instance, you have to let
2 her proceed to some safe place so that the other ships
3 can pass her.

4 Q. I have another case here that I found in
5 Exhibit 473, the case of the Signeborg
6 and mentioned there as the cause of the accident is
7 "Bridge Closed; dispatcher could not warn the vessel."
8 How would you list such an accident? Would you list
9 that under "Vessel" or under "Equipment"? It is not
10 even equipment in that case. There is, apparently,
11 the bridge that won't close, or wasn't closed, for
12 some reason, and the dispatching officer being unable
13 to warn the vessel that the bridge was closed. Now,
14 for the purposes of these statistics contained in
15 Exhibit 477, how would you list this accident?

16 A. It would be listed as an accident due
17 to the ship, because the master is under the necessity
18 of controlling his vessel and avoiding approaching the
19 structure so close that he strikes it. He is under the
20 necessity of halting his ship at the approach to the
21 structures rather than permitting it to come within
22 striking range of the bridge. The fact that the
23 bridge does not raise may be due to many, many causes,
24 such as a train on the block or failure of electrical
25 or other supplies, or just for the simple fact that
26 the bridge locks are frozen in, or something else of
27 that nature happens, or a vehicle on the structure,
28 occasionally occurs. It is one of the paramount
29 duties of the master to control his ship so that she
30 doesn't come into close proximity of the structure.

1 Q. Well, that is all very well. But the
2 master was informed that the bridge was being opened. He
3 could not see the bridge and he still had to keep the
4 steerage way upon his ship and the dispatcher, through
5 some cause which we do not know, could not warn the
6 master of that fact; would you still say that this
7 accident was due to the fault of the vessel?

8 A. I would, indeed, because the master must
9 not approach s structure until the light thereon is green
10 or if no light is showing, he must not come within the
11 close confines of the structure unless the indications
12 are that it is in fact ready. It is his duty and
13 responsibility to know that it is ready, not to know
14 that it may or may not be. The reference to the fact that
15 the dispatcher could not raise him implies, somewhat,
16 that either his radio-telephone was either out of order
17 or was not properly watched and that the call for the
18 ship was, for some reason unheeded. Sometimes, in a
19 difficult situation, the master aboard the ship
20 neglects to answer to his call and the dispatcher is
21 unable to reach him. That is not necessarily so in
22 this case, but it is quite broadly implied.

23 Q. Yes. But this is an assumption only.
24 You assume that he was not watching his R/T set or that
25 it was not switched on and you assume also that the
26 green light was not on, that the green light may have
27 been defective?

28 A. The green light could not go on. The
29 structures are interlocked, so that the green light
30 cannot be displayed until the bridge is in fact fully



1 opened. The light could burn out, and occasionally it
2 happens, but it could not show green. You could not
3 give the come-on signal, the proceed signal, until the
4 structure is in fact ready for him.

5 Q. How would you explain if there was no
6 fault from the equipment, that this accident was not
7 due to the equipment, that you have mentioned the dis-
8 patching officer could not warn the vessel? I do not
9 understand why he would want to warn a vessel if the
10 light was still red and the bridge was not open?

11 A. This presumes some halt or some delay
12 in the smooth functioning of the system. If the
13 structure had opened, as it was assumed to have opened,
14 or expected to open, then the condition which we are
15 talking about would not have occurred. That might be
16 due to any number of reasons, but the basis part of
17 the regulation is that the master must control his
18 ship to avoid getting into that situation until the
19 structure is actually open and ready for him. He must
20 assume tht it is not going to open by the time he ---
21 when he gets to the limit of the approach, if it is
22 not in fact indicated so by a green light.

23 Q. I do not want to press this further,
24 but it is possible...

25 A. The reason that the dispatcher is
26 mentioned is to bring out all the factors as known at
27 that time with respect to it and this might indicate
28 that we would find that his equipment was faulty or
29 perhaps that he didn't guard his equipment. Anyway,
30 he did not reply.



English

Q. But you can also assume that the primary cause of the accident was faulty equipment, or something like that?

A. When it is in the equipment category, it would be a delay caused by a bridge which didn't open, or an accident of any kind that was caused where the bridge didn't open and the ships would be forced to tie up. In this case, the ship was actually in contact with the structure. The faulty equipment would imply a breakdown in the lock gate machinery, for instance, whereby we couldn't open or close the gates, or a valve that wouldn't open and therefore the ship had to tie up.

Q. I want to make it clear, Mr. Burnside, that I am not criticizing in any way the way this exhibit was prepared. But I want to get all the facts into the record so that the proper interpretation will be given to the document.

A. Yes. I understand.

Q. I have another case, the last one, taken out of Exhibit 473 again. This is the case of the Blue River and the cause of accident is listed as "Operator failed to raise fender . . . " would that be listed as an accident caused by the ship or what?

A. I would have to go back to the reference to determine just where that was placed. This is one of the fortunately few occasions where, as you described it, our operator neglected, for some reason or other, to raise the fender. Can you tell from that whether that was at the St. Lambert lock and fender number 3?

Q. Yes. That was the eastern section, yes, 1959



nglish 1 August 1st: "While entering the St. Lambert lock, down-
2 bound, struck and damaged Fender number 3." And "Operator
3 failed to raise fender which is of the submerged type."

4 A. I am sure that I recall the incident that
5 the operator in the case, through human error, failed to
6 raise the fender and the ship came in contact with it; but
7 what I do not know is whether -- which category it was
8 placed in. Fortunately, we had very few of this kind,
9 due to two things: One, the co-operation and care that
10 is taken on the part of our operating employees, which is
11 also much appreciated by ourselves, and secondly, that
12 the system is interlocked so that it is quite difficult
13 for an operator to make a wrong movement. His structure
14 does not operate if he doesn't follow the proper sequence
15 and that is one of the things what happens. If a structure
16 does not move as it should do, the operators are under
17 instructions to stop and proceed with his operation again.
18 He starts with the first thing and goes over it again.
19 This may take some seconds for him to go through the
20 actual physical motion of touching various items and he
21 may, in this way, suddenly realized that he touched button
22 number 4 before button number 3 and that is why a structure
23 does not operate. They are interlocked, so faulty operation
24 is difficult and it is just one of those things.

25 Q. In the case of a fender being dropped
26 and obstructing your gates and preventing you from closing
27 them, would you attribute this accident to the vessel or
28 to the equipment?

29 A. That is listed under "Obstruction"?

30 Q. "Obstruction".



English 1

A. Obstruction, because it obstructs the motion of the gate and the faulty object may have been dropped in the canal's works before and became waterlogged and sunk and eventually was swept into a place to cause a delay.

Q. Is there not a regulation to the effect that the fenders used on ships going through the Seaway must be of the floating type?

A. Yes, that is true; but the ~~timber~~ becomes waterlogged. If it is steel cable, sometimes the difference between the floating object and a submerged object is rather small and if they are left long enough, most of them will eventually sink and cause trouble. This may be a fairly early period to which you refer -- I don't know -- but certainly at the opening period in 1959 we had a great number of cases where the fenders were in profusion and were not adequately attached to the ship and tore off in great numbers and we had men skimming them off the water. Some did evade us and caused trouble.

Q. Would you be prepared to state as to whether or not on this Exhibit 477 you would have listed the accidents as being due to the fault of the vessel but would be caused by breakdowns of machinery, for example?



1 A. Those are not separated. We do not
2 indicate whether it is apparent to us or whether it is
3 suspected by us that conning of the ship was at fault
4 or questionable or whether it is a failure of the
5 steering engines or a failure of the air supply or
6 any of the other things that might happen. That is
7 correct.

8 Q. So from the information that I have
9 just had, through your testimony, and I safe in assuming
10 that a number of accidents listed as having been caused
11 by the vessel could have been caused without any fault
12 on the part of the master or the pilot of that vessel?

13 A. I would have to qualify that, because
14 it is the master's duty to see that his ship is in
15 adequate operating aondition and if his engine fails,
16 or some part of the equipment is faulty, that is the
17 master's responsibility, as distinct from faulty
18 conning of the ship. I would agree with you up to
19 the extent of conning.

20 Q. This is quite a fine distinction.
21 But let me put my question the other way: Would you
22 say that some of the accidents listed in Exhibit 477
23 as having been caused by the vessel were not errors
24 in navigation?

25 A. I am sure that there have been
26 instances where the skill of the navigator was not
27 involved as a navigator, sir. If you will absolve the
28 captain of the responsibility of seeing that his ship
29 is in fact ready and properly equipped...

30 Q. This is also a responsibility of the



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Burnside, cr.ex.
(Langlois)

4451

English

- 1 owner of the ship --- not the captain alone?
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1 THE WITNESS: We recommend that a wrong-way
2 signal be used on the vessel so that the man on the bridge
3 is aware of a wrong engine movement immediately, because
4 so that he can take steps to either correct his movement
5 of the indicator. It is possible for the captain to throw
6 the indicator full ahead instead of full astern, because
7 in these cases there is rather a violent difference of
8 opinion between the master the crew as a whole; each
9 claims that each other is at fault.

10 THE CHAIRMAN: I can see it is a common excuse
11 from the record.

12 Q. Now, going through this Exhibit 473,
13 I noted that many of these accidents were of a very minor
14 nature. Is it not reasonable to expect that with the boats
15 ships, your locks would suffer some slight damage to
16 being used by large vessels with large draughts and very
17 heavily laden?

18 A. I think the point there is that the
19 potential damage might have been quite large, but the
20 actual damage may, in fact, result in very slight damage,
21 or perhaps the fact that the concrete walls were sub-
22 stantial and were not fractured by the ship. That is
23 also involved, but principally the fact that the ship
24 had swung out of control, that wouldn't occur.

25 Q. Was there any agreement, say, even
26 before the Seaway among canalers that they would cut
27 back at least to 1,000 pounds?

28 A. The clearance was something in the
29 order of four inches. We shouldn't go into that.

30 Q. Leaving aside minor accidents now,



1 what would you consider a major disaster in your Seaway?

2 A. A major disaster would be a blocking
3 of the system for any period of time.

4 Q. How could this be caused?

5 A. It could be readily caused, I think, by
6 vessels sinking in the channel in such a position that
7 other vessels could not pass.

8 Q. What about removing the gates?

9 A. The gates are amenable to change. We
10 are equipped with gate lifters and spare gates so that
11 they may be interchanged. There could be an accident,
12 but not of a major disaster.

13 Q. How long would it take to replace with
14 a spare gate?

15 A. Fortunately, our experience has been
16 limited; we haven't had to do it under emergency conditions.
17 But probably something of the order of a couple of days.
18 It would depend on the damage to the gate itself. If
19 it was merely displaced, perhaps not too long, but if
20 it was in a position where it was difficult to retrieve
21 it, it may be longer. But it wouldn't
22 in the normal course of events, be too long an operation,
23 unless the vessel causing the accident was somehow
24 involved with the gate, and that may be much more
25 difficult. But just to replace a gate it would be two
26 days, something of that order.

27 Q. Would the consequence of such an
28 accident be more serious if the gate had to be removed
29 in the last days of the navigation season, in the Winter
30 months on the lakes?



1 A. It would, and eventually the fall freeze-
2 up is going to occur three days earlier than three days
3 later, and if the shipowners didn't take notice of the
4 fact that an early freeze-up is going to occur, then they
5 will be frozen in. They have got out so far.

6 Q. If, as a result of an accident of this
7 kind, a number of ships were caught in the lakes in the
8 Winter, that would be of a major consequence to the
9 trade.

10 A. It would be a major consequence to
11 the ships trapped, but not to the system. It would be
12 unfortunate, but not, I think, a major disaster.

13 Q. What is the most vulnerable part of
14 your equipment, your installation, which would cause
15 most damage?

16 A. I think as to serious damage the
17 bridges, perhaps by reason of the fact that few of them
18 are protected by fender booms. A structure such as a
19 bridge with which a ship collides is probably demolished.
20 Many of you are no doubt familiar with an accident which
21 occurred at Hamilton where a ship struck a bridge there,
22 a fairly light blow. The ship was almost unmarked, and
23 yet the bridge itself was demolished and it was deposited
24 in the channel, it was there for some time.

25 A second one would be the gates, and because
26 of the fact that they are protected by the fender boom,
27 they are less likely to be struck. But if a ship comes
28 in at an excessive speed, I am satisfied the fenders would
29 not protect the gates under all conditions; it could be
30 demolished.



1 Q. Could you give us an idea of the
2 stress or strain the fenders could take?

3 A. No, I don't recall. I do know that a
4 canal size ship approached the lock at some excess speed,
5 the speed was unknown to us, but the ship was light and
6 it touched our half-inch cable halfway through. It
7 was restrained, it didn't touch the gate, but what
8 would happen if a large laden upper laker should come
9 charging into the lock is, I am satisfied, that it would
10 take the gates out. I don't recall the precise restraining
11 figure of the cable.

12 Q. Am I to understand that the larger and
13 the heavier the ship the greater is the hazard of crashing
14 through the gate and failure to reverse in time or to stop?

15 A. That is correct; the more energy there
16 is on the ship, the more difficult it is to stop it.

17 Q. Am I to understand that the larger the
18 lake vessels and the heavier they are, the more liable
19 they are to damage the locks?

20 A. Assuming that the ship's engine are
21 not effective. If the engines are effective, they are,
22 I believe, designed to stop the ship in a distance
23 comparable to a small ship.

24 Q. Could much damage be caused by a ship
25 having to come into the lock with some headway and
26 having to stop by going full astern, the bow of the
27 ship could go against one of the structures? Could just
28 the swinging of the bow against the lock cause much
29 damage?

30 A. Not very much.

1 It might damage the adjacent bridge by reason of the fact
2 that the bow may overhang; under those conditions, the
3 bridge is not aligned with the centre line of the lock,
4 and the protrusion may touch the bridge or some other
5 installation of that order.

6 Q. Is it to your knowledge that some of
7 the accidents which have been reported in the Seaway were
8 really due to the language barrier as between the crew
9 and your own staff? I am speaking, of course, of
10 foreign vessels.

11 A. The language barrier is probably always
12 a difficulty. We have some difficulty in communicating
13 with the crew of the foreign ships. The Canada Shipping
14 Act states, in fact, that the ships must have aboard
15 an individual who is proficient in the English language,
16 and by reason of the fact that an officer of this nature
17 has that necessity, our difficulties are not as great
18 as they otherwise would be. There is a difficulty, of
19 course, in speaking over the telephone where the voice
20 is somewhat muted, it is more difficult for one who
21 doesn't understand the language and one who doesn't
22 speak it quite fluently.

23 Q. Do you feel that the R.T.O officer
24 should have a certificate in English and French, that he
25 is able to speak in either of the official languages
26 in Canada?

27 A. We don't specify that, because it
28 is already covered by The Canada Shipping Act, and we
29 don't have the necessity of so stipulating.

30 Q. In your application for permit in



1 transit in the Seaway, you don't have this information
2 as to the permit held by the R.T.O. operator?

3 A. No, we don't administer or control
4 that. I believe the telecommunications branch of the
5 Department of Transport would deal with that. We don't
6 examine their licences, nor do we license them.

7 Q. Would you be prepared to say that the
8 fact that you have a pilot speaking both official
9 languages of Canada on board a vessel this situation
10 is minimized to quite an extent, this language
11 difficulty?

12 A. In all honesty, I would say it is not,
13 in fact, and for this reason: You have raised the
14 question, and the answer would be this: That most of
15 the ships' officers of the Canadian fleet, their native
16 tongue is English and they are under some difficulty
17 in understanding the dispatch instructions issued to
18 the pilot, say, of an adjacent ship, to this extent
19 that they do listen in over the dispatch system to a
20 request for a ship just ahead of them, and it is
21 important to them that they know what the situation is,
22 so that they may take evasive action or be prepared for
23 some evasive action, or just simply know how many ships
24 are in a certain location. We have, in fact, used
25 communication from both the major bodies with whom we
26 deal. The Dominion Marine Association have it in their
27 yearly summary of items, the fact that their masters
28 normally could not understand the dispatch given in
29 French to an adjoining ship, and from the Shipping
30 Federation there was a communication inquiring as to



1 what would be done about this particular problem. I do
2 not recall the exact wording of the letter, but that was
3 the content of it, that this was a difficulty, and to that
4 extent it is difficult. Now, I am perhaps going somewhat
5 afield from what you intended, sir, but it is a fact, it
6 is there.

7 Q. Could the remarks or complaints, or
8 whatever you call them, be filed?

9 A. The one in the form of a letter -- I
10 don't know that there would be any reason why we shouldn't.
11 As I recall, the others in the proceeding of the Dominion
12 Marine Association conducted this during the past winter,
13 and it comes up as an item. I think it would not be
14 difficult to produce it if required.

15 The other part of your question leading to
16 the matter of the languages of the world with the
17 masters might be speaking is much ameliorated by the fact
18 that the pilots are aboard this ship and can communicate
19 with the radio officer at some distance from him,
20 rather than have the master attempt to convey what he
21 has to say in English or in French. It is much better
22 to have avoided that translating difficulty with the
23 pilots actually being there to talk with the man and
24 being aware themselves of the situation, so that they
25 can not only understand what the dispatcher says, but
26 they can convey to the dispatcher the concise conditions
27 as an agent of the master.

28

29

30



1 MR. LANGLOIS: In fact that was my question.

2 MR. JACQUES: That was the answer which my
3 learned friend expected.

4 MR. LANGLOIS: My lord, I don't want to
5 press this request, but I think the witness has just
6 given us a very important aspect of the situation that
7 could bear maybe investigation further, and I don't know
8 if the Commission could not, if they are not of a
9 confidential character, obtain these documents that
10 the witness referred to.

11 THE CHAIRMAN: I think it can be studied
12 because this is a difficulty that arises here, and has
13 to be taken care of, because this is a situation that
14 we can certainly see that there might be some confusion
15 at a time when there should not be, and it is the
16 cause of accidents at the time. So, therefore,
17 this situation we maybe will find that it has to be
18 lived with, and if so that a solution has to be
19 provided for it, and if so I think that we should be
20 made aware of the situation as a fact.

21 MR. JACQUES: Perhaps the witness could
22 bring these documents, or references, with him when
23 he appears again before the Commission.

24 THE CHAIRMAN: Because it is no use thinking
25 that because ships cross the St. Lawrence that everybody
26 on board should speak both French and English and it
27 is going to be expected that ships are going to have
28 masters who may only speak French, and masters who may
29 only speak English. So therefore this is a situation
30 that has to be looked into, and I wish that the



1 information be given, if possible.

2 Q. Can you tell us whether or not the
3 operators on the St. Lawrence are bilingual, meaning by
4 that that they speak both English and French?

5 A. No, they are not. The station at
6 Beauharnois, to the best of my knowledge all are bilingual.
7 The men at Iroquois, I am inclined to doubt that they
8 are, and to the best of my knowledge the men at the
9 Welland station aren't bilingual. We have the three
10 situations.

11 MR. LANGLOIS: My lord, I was told that
12 you thought of adjourning at four-thirty, and I am
13 changing the subject now.

14 THE CHAIRMAN: I do suppose that Mr.
15 Brisset will have a few questions to ask the witness,
16 and that we can't dispose of what you have in a few
17 minutes.

18 MR. BRISSET: That is right.

19 MR. LANGLOIS: I still have some questions,
20 my lord.

21 THE CHAIRMAN: Yes, I thought that we
22 might be able to dispose of the witness tonight, but
23 the evidence being given by Mr. Burnside is very
24 important, very interesting, and very learned, and
25 we are learning a lot, and so we will ask you to come
26 again tomorrow, Mr. Burnside.

27 MR. JACQUES: May it please your lordship,
28 we have several out of town witnesses who have been
29 waiting all day, particularly the representative of
30 the National Harbours Board, from Three Rivers, the



1 harbourmaster of Sorel, and the harbourmaster of
2 Kingston, and I wonder if it would be possible to put
3 them on the stand, at least the two harbourmasters, to
4 put them on the stand tomorrow morning?

5 THE CHAIRMAN: All right, the first thing
6 tomorrow morning. You would expect evidence to be for
7 an hour, or an hour and a half?

8 MR. JACQUES: Approximately an hour and a
9 half.

10 THE CHAIRMAN: So you could ask Mr. Burnside
11 to come back in the afternoon, or do you want him here
12 at eleven o'clock in the morning?

13 MR. JACQUES: I think it would be advisable
14 for him to be here at eleven, my lord.

15 THE CHAIRMAN: So we will adjourn now
16 until tomorrow morning at ten o'clock.

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18
19 ---Whereupon the hearing was adjourned at 4:30 p.m.
20 until ten a.m. on Friday, the 28th of June, 1963.

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ROYAL COMMISSION

ON

PILOTAGE

HEARINGS

HELD AT

MONTREAL
QUEBEC

VOLUME No.:

39

DATE:

June 28, 1963

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ROYAL COMMISSION ON MARINE PILOTAGE

Proceedings of the hearing
held at the Court House,
Montreal, Quebec, on the
28th day of June, 1963.

COMMISSION:

The Honourable Mr. Justice Bernier Chairman

Robert K. Smith, Esq. Q.C. Member

Harold A. Renwick, Esq. Member

Mr. Gilbert Nadeau Secretary

COMMISSION COUNSEL:

Mr. Maurice Jacques

Mr. Leopold Langlois, Q.C. for the Canadian
Merchant Service
Guild

PRESENT:

Mr. J. Brisset) for the Shipping Federation
Mr. H. Collet) of Canada,

Mr. J.M. Jacques for the National Harbour
Board,

Mr. J. Mahoney) for the Dominion Marine
Mr. C. Mason) Association,
for the Federation of St.
Mr. Marc Lalonde Lawrence River Pilots; Corporation
of the Lower St. Lawrence
Pilots; the Corporation of
the Mid-St. Lawrence Pilots;
the Corporation of Montreal
Harbour Pilots; the Corpora-
tion of the St. Lawrence
River and Seaway Pilots;
the Corporation of Upper
St. Lawrence Pilots.

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1 ALSO PRESENT:

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3

Captain J.S. Scott, Technical Advisor to the
Commission,

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Captain F.S. Slocombe, for the Department of
Transport and liaison officer.

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TORONTO, ONTARIO

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ANGUS, STONEHOUSE & CO. LTD.
TORONTO, ONTARIO

Montreal, Quebec
June 28th, 1963

4462

---ON COMMENCING AT 10:00 A.M.

THE CHAIRMAN: Gentlemen, I am being told that there are rumours to the effect that there have been some changes. I must say that the public hearings as scheduled are going to remain as such. We are sitting here for three weeks. We are practically at the end of the first week. The week of the 22nd we are going to Quebec City; consequently, there is absolutely no change whatsoever. The scheduling stays as it was provided for at the outset. We know that it will be difficult because aside from the interested parties here, there are other interested parties in Quebec who would like to be present and whenever there are some public notices, the only change that might be made would be in the rule and I think this will depend entirely on the fact of whether the Commissioners have had time to study the brief of the pilots. At the outset, the Commission wants to study the briefs before hearing the evidence, so this is about the only change that might occur.

MR. LALONDE: On a question of privilege, my lord, I would like to draw the attention of the Commission to an editorial in an otherwise distinguished journal in Montreal which, unfortunately, seems to suffer, like so many other people, sudden aberrations from the norm in the matter of shipping and pilotage, which detract from its usual sophisticated level in other fields.

I refer to an editorial in the Montreal Star yesterday night. One can very well understand that



English

1
2 reporters, working under very hard-pressed conditions
3 and hurried conditions, might make mistakes or errors
4 in reporting our courts, or reporting events; but one
5 would expect a more careful attention given to editorials
6 as such.

7 As far as the pilots are concerned, they have
8 become somewhat hardened to the, let us say, ill-informed
9 and even biased and partisan approach which the Montreal
10 Star has adopted to pilots in the past. As a matter of
11 fact, we have every reason to believe that this editorial
12 was written by the same person who has written other
13 editorials in the past on the subject. But we would hope
14 that in view of the sittings of this Commission and the
15 wide scope of its studies, that the Montreal Star would
16 have dropped its biased attitude to pilots in pilotage
17 matters and would, rather, have reserved its judgment
18 on the matters to be studied, until the Commission would
19 have made its report. Instead, the Star has decided to
20 take a stand in one fell swoop on what the Commission has
21 been studying for the last six months, and I understand
22 will be studying for some more months, before reaching
23 any conclusion in what are disputed and certainly very
24 arguable matters.

25 I refer, for instance, to the editorial yesterday
26 night where at the conclusion of the editorial, in a single
27 paragraph, the Star declares that the pilots would
28 benefit themselves through fixed incomes and pension rights
29 and that, in a way, the national interest would be protected
30 through the discipline which the Department could exercise
over its "direct employees".



1 The least that one can say is that this is
2 a point which will be argued and debated at length before
3 this Commission.

4 I do not want to contest the right of the
5 newspaper to take any stand that they want. On the other
6 hand, the least one can expect is that the paper, before
7 writing an editorial, would be well informed; while,
8 in this particular editorial, there is certainly a
9 serious mistake as to what is the purpose of this present
10 Commission. It is indicated, in the first paragraph, in
11 the following way, and I quote: "The investigation is
12 directed at the work of the pilots." Well, it is true
13 that part of the responsibility is that, but not by any
14 means the whole of the purpose of the Commission.

15 Further down, there is an indication that this
16 Commission would be sitting in order to study whether
17 higher or lower fees for pilotage should be proposed. They
18 say: "Now feelings appear to have settled down for the
19 better and the presentation of opposing cases in the
20 pilots' demands for higher fees will be free, at least
21 to some extent, from the rancor that might have prevailed
22 earlier."

23
24
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27
28 THE CHAIRMAN: It may be one question that we
29 are sitting here now for four days and that nothing has
30 been said as yet on that.



English

1 MR. LALONDE: And it might say that if I
2 can make available the report to all the Commission
3 and all the newspapers, soon they will find out that in
4 the whole of the brief the main aspect of the brief
5 is certainly not a request for higher fees for the
6 pilots.

7 THE CHAIRMAN: We need not be convinced of
8 that. We know that.

9 MR. LALONDE: And the third point is that
10 they state:

11
12 "The existing fees are set by the Department
13 "Transport, which collects them and transfers
14 "the funds to the pilotage federation."

15
16 There again, I think our brief explains quite at length
17 what the situation is. I just want to add that the
18 Federation has nothing to do with pooling of money. This
19 is done by individual associations in each District.

20 THE CHAIRMAN: Maybe the journal has not had
21 your brief.

22 MR. LALONDE: Unfortunately, they seem to have
23 reported it in other pages. So, I say unfortunately they
24 did not have the English copy. I hope that the Montreal
25 Star editors will either do it bilingually or that we
26 will be able to provide them with briefs in both languages
27 pretty soon.

28 Nevertheless, my lord, if I may just conclude
29 with this statement, that in matters of pilotage the Montreal
30 Star is all wet.



English

1 THE CHAIRMAN: Of course, we cannot do anything
2 against journalists and newspapers giving accounts or
3 rendering opinions. Now, I have not read the editorial
4 and I can't judge. Therefore, those who give opinions,
5 without knowing all the facts, it is very dangerous. It
6 may be in good faith, but we know that unless you know
7 all the aspects of the problem, and even if you knew all
8 the aspects of the problem in Montreal, that wouldn't
9 mean the aspects of pilotage in Canada because we have
10 been all over Canada and everywhere we have seen different
11 aspects of pilotage and it will be impossible for us to
12 give a decision based only on the evidence in Montreal.
13 That would be detrimental for pilotage in Canada in
14 general because what is true in Vancouver is not true
15 in Gaspe Peninsula. As we have seen, there is a bad
16 example over there; there is no organized pilotage. It
17 is still at the old stage -- the first one to the ladder
18 is the one who gets the ship and we found that it is
19 dangerous to have unqualified people to take on big ships.
20 While this is one of the things we have seen in other
21 places, we have seen different things. Therefore, one
22 of our tasks is to try to see some basic principle all through
23 these various patterns we have seen and to try to recommend
24 something that can be useful for everybody. Therefore,
25 all judgements that are given before the evidence is brought
26 before the Commission, I think is very dangerous. Again,
27 I haven't read the article in question and I can't pass any
28 judgment and I would not like to pass any judgement. This
29 is just a warning when I say that.
30

MR. BRISSET: My lord, if I may say a word here,



English 1 I think it would be a very bad thing indeed if the
2 liberty of the press was in any way curtailed to express
3 opinions on pilotage problems, as they certainly have
4 the liberty of expressing opinions on other aspects of
5 our National Economy. The opinions may be wrong or they
6 may be right, but we are living in a free country and
7 can express our opinions. I wouldn't like to see Mr.
8 Lalonde's statement, which I do not consider warranted,
9 as a statement that should in any way curtail this liberty
10 or to be used to so curtail it.

11 MR. LALONDE: My lord, I would not like my
12 colleague to appear as the defender of the freedom of the
13 press while I want to restrict it. On the contrary, I
14 said that it was not my intention at all to prevent any
15 paper writing whatever they wanted to on a particular
16 subject, but I think that the citizens concerned certainly
17 have a right also, as well as the press, to state the
18 facts if they feel that the public is misinformed in
19 certain respects and that is the least right which can
20 be recognized of citizens, just as we recognize it in the
21 press.

22 THE CHAIRMAN: There is a distinction between
23 reporting the facts and giving an opinion, while not every-
24 body is free to have that. But as far as facts are concerned
25 I think they should be reported as exactly as possible.
26 But, of course, as all lawyers know, you may have a
27 different version of facts with all the witnesses you have.
28 Well, this may be in good faith; so, in any event, the
29 remarks I made are just a general warning. It is very
30 difficult to pass a judgement before all the available facts



are given.

RENE KIROUAC, Sworn

(Through the interpreter)

DIRECT EXAMINATION BY MR. JACQUES:

Q. Your full name?

A. Rene Kirouac.

Q. What is your age?

A. 49.

Q. What is your job?

A. Secretary of Montreal Boatmen Limited.

Q. What is the objection of Montreal Boatmen Limited? Do you carry pilots?

A. Yes.

Q. Since how long have you been doing that?

A. Since 1941.

Q. How many boats do you have?

A. Five boats.

Q. Can you describe these boats?

A. We have four with diesel engines. Number 1 and 3 can transport pilots.

Q. Would you repeat that, please?
Number 1 and 3 are entitled to transport pilots?

A. The others do other jobs.

Q. You have talked about the tonnage. Can you give the length and width, from the mechanical point of view?

A. I am Secretary of the Boatmen. I would like the head of the Department to talk about it. If you want all the figures on this, the head of the Department



1 can give you all these details.

2 Q. Thank you very much. Can you tell
3 us the number of pilots that you have carried last year?

4 A. The exact number is rather difficult to
5 give, but we get them at the boat and then bring them
6 back to the boat, because we do not only transport pilots,
7 but as far as the pilots are concerned I think about 20
8 per cent is done by us.

9 Q. Now, the number of pilots carried?

10 A. It is very difficult to give an exact
11 figure. Some days we have more customers. We can perhaps
12 carry 10 per day. It depends on the ship, because we
13 only carry pilots at section 93.

14 Q. Do your records give this indication of
15 the number of pilots that you carry?

16 A. I think if you ask Mr.
17 he will be able to tell you because he is in charge of the
18 service.

19 Q. Now, can you give us an idea of the value
20 of these two ships assigned to transport of pilots?

21 A. Approximately the number 1 and number 3
22 \$15,000.00 -- each one, of course.

23 Q. Do you know the age of the ships?

24 A. The last one is -- number 1 is 3 years old
25 and number 3 is 3 years old and other about four or five
26 years old.

27 Q. Are they equipped with radio telephone or
28 radar?

29 A. No, no radar. They are diesel powered.

30 A. Aside from the service to pilots, do they



1 carry other passengers?

2 A. Yes, we carry --

3 Q. These two, I mean?

4 A. In general, these are for pilots and
5 agents.

6 Q. One and three are the two ships for
7 carrying passengers?

8 A. Not only pilots. It could be agents of
9 the company or immigration officers. We carry pilots
10 and agents or shipowners' agents, radio inspectors,
11 quarantine officers and immigration officers, et cetera.

12 Q. And Seaway inspectors?

13 A. Yes, sometimes.

14 Q. Are your ships licensed by the Federal
15 Government?

16 A. Our boats are registered at the Department
17 of Transport and the inspector comes every year to inspect
18 the ship.

19 Q. So they are licensed for how many
20 passengers?

21 A. I cannot give you those details.

22 Q. Have you had any complaints on behalf of
23 the pilots or the pilotage authorities concerning the
24 service that you supply?

25 A. Not in the past ten years, no. We have
26 not heard that the pilots were not satisfied with our
27 service -- no official complaints concerning the service.

28 Q. How do we go about getting your service?
29 Supposing you have a ship in the Montreal harbour who
30 is going to get in touch with you?



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TORONTO, ONTARIO

Kirouac, dir. ex.
(Jacques)

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1
2 A. The pilotage office calls us and now
3 we have a signalling service. We put on lights at
4 night and we are informed through our offices on the
5 shore and this signalling service as well on the
6 bank of the St. Lawrence. On the east section we are
7 informed that a boat is coming and we are informed by
8 those signals that the ship is anchored and that we are
9 required for services.

10 Q. Who is in charge of those signals?
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BL/RPS

ench

1 A. Well, it is the ship, the pilot, I mean
2 the **captain**, the master, and he makes signals on the ship
3 at night, because before they used their whistle and
4 that made too much noise at night, so we have got these
5 signals, lighting signals. So we have the Shipping
6 Federation, and we have somebody who watches to see if
7 there are any signals.

8 Q. When the ship arrives in Montreal and
9 he makes a lighting signal to **say** whether your services
10 are required, your station is where in the harbour of
11 Montreal?

12 A. In section 83, on the shore, near the
13 water.

14 Q. Now, you can see everything in the harbour?

15 A. Yes, because we are at an angle, and
16 we get a good view.

17 Q. Do you have a man --

18 A. We have several men who are watching.

19 Q. How many persons do you have in your
20 office on the shore?

21 A. We have seven.

22 Q. Seven in the office?

23 A. Seven persons who do the services in the
24 offices and on the boats; and, of course, we have drivers,
25 we have engineers on the ships.

26 Q. How many employees do you have on a ship?

27 A. It depends if it is for mooring. We have
28 only one engineer. They have their permit which allows
29 them to drive our boats.

30 Q. How many passengers? You don't know?



ench

1 A. No, I don't know that.

2 Q. Now, if someone wants to use your boat
3 to take a pilot back to a ship at anchorage, how do you
4 proceed?

5 A. Well, if he comes from the shore he
6 comes to our office. The ships are all stationed there,
7 and he comes to our office and says he wants to go to a
8 given ship, and we take him there.

9 Q. Does it happen that a pilot arrives there
10 and there is no ship available?

11 A. That very seldom happens. If the two
12 of them are gone he may have to wait a little bit, but
13 usually they are not all gone at the same time.

14 Q. How much do you ask for this service?
15 Three and a half dollars?

16 A. Yes, it is three and a half dollars for
17 pilots, agents, everybody, per ship, one way, and three
18 and a half dollars for the return.

19 Q. So you charge three and a half dollars for
20 the ship, and if when you are going on a ship you are
21 bringing an agent, you charge also the agent three and
22 a half dollars?

23 A. Well, if it is the same trip, \$3.50, they
24 divide the \$3.50.

25 Q. So the agent also has to pay three and a
26 half dollars?

27 A. Yes.

28 Q. So if you have four persons, it is four
29 times three and a half dollars?

30 A. The same cases, the immigration officer,



rench

1 if he goes with an assistant we only charge for one
2 trip; we don't charge more than one person from the same
3 Department. If there are two or three persons from the
4 Agricultural Department, we only charge for one. If it
5 is the same ship and the same company, we only charge for
6 it. Now, if it is a different ship, we go from one ship
7 to the next ship and take the agent to the next ship as
8 approved by the Shipping Federation.

9 Q. For the pilots, three and a half dollars
10 to go eachway?

11 A. Yes, to go each way.

12 Q. If you go to take him to the boat, it is
13 three and a half dollars, and if you take him back it is
14 three and a half dollars?

15 A. Yes.

16 Q. Has this been approved by the Public
17 Services in Quebec?

18 A. With the Public Services Board in Quebec
19 we have an order which enables us to transport on water
20 in Montreal harbour, to tie boats. We have an ordinance.

21 Q. Do you remember when this order was given?

22 A. Five or six years ago, I think. I think it
23 is the Department of Transport who was supposed to do that.
24 It used to be the Public Services Board, and now it is the
25 Transport Board who takes care of this matter. I have
26 to look back on my papers.

27 THE CHAIRMAN: Do you mean five or six years it
28 has been under the Transport Board or under the Provincial
29 Services?

30 THE WITNESS: The decree has been passed about



French

1 five or six years ago for this harbour. It was given to
2 us five or six years ago.

3 THE CHAIRMAN: Are you doing this in Montreal?

4 THE WITNESS: We have a provincial charter in
5 Montreal since 1941, but the work was smaller before and
6 we didn't have to have an order, but in the past years,
7 since the work has increased a great deal, we have to
8 protect ourselves and we have to get a permit to do this
9 type of work in Montreal.

10 THE CHAIRMAN: When did you have this permit?

11 THE WITNESS: As I told you, it was about five
12 or six years ago.

13 THE CHAIRMAN: You used to do it without a permit
14 before?

15 THE WITNESS: We were under the Public Services
16 in Quebec. We have an annual permit that we ask for from
17 the National Board in Montreal, we ask them to give us
18 this permit to do the work in the harbour of Montreal.

19 MR. JACQUES: The Government of Quebec in its
20 statutes in 1941 had recognized the jurisdiction on
21 maritime transport in the Province, and control of the
22 application of this law had been under the direction of the
23 Public Services Board who had not applied it so far or had
24 tolerated it and nobody asked for permits. Nevertheless,
25 they gave permits to anyone who asked for it. A few years
26 ago the law has been applied, that is to say, a law was
27 enforced through the Public Services Board, and this lasted
28 for a year or two, and then the application of the law was
29 transferred to the Transport Board. Now it is the Trans-
30 port Board who requires that anyone who has to do with



French

1 maritime transport within the Province requires a permit,
2 ask for a permit for carrying on the service. The general
3 principles which have been followed so far are that, as
4 the Board for trucking, for instance, but, of course,
5 there have been certain modifications since 1961, and
6 this law has been enforced and applied as much as possible.
7 Before 1960, 1961, I think nobody asked the Montreal
8 Boatmen Limited if they had a permit from the Montreal
9 Board.

10 MR. LANGLOIS: My lord, could I add to the
11 comments of my colleague? In 1961, when the law was
12 amended, the law of the Public Services Board concerned
13 transport or navigation from one region to another, and
14 then a general decree for transport was published by the
15 Provincial Transport Board and conditions and requirements
16 for public transport by ship are published in this law.

17 MR. JACQUES: And if this may be of any help
18 to the Commission, I shall bring a copy of the general
19 order, decree or law, in English and in French.

20 THE CHAIRMAN: Now, on the same subject, this
21 is a matter of jurisdiction, and it comes to my mind the
22 jurisdiction of transport in airports, aerodromes, of the
23 Department of Transport, and there is something in the
24 Federal Law saying that this is of Federal jurisdiction.
25 That is why I raised the question, to know whether there
26 is something along these lines concerning federal service,
27 such as pilots' service.

28 MR. JACQUES: Well, my lord, the Federal Transport
29 Board has jurisdiction on freight rates which are charged
30 for services between the western limits of Quebec harbour



French

1 to the Great Lakes.

2 THE CHAIRMAN: I understand that there
3 is a difference here with the Montreal Boatmen Limited.
4 They carry not only the pilots but they carry all the
5 passengers who want to go on board ship, so perhaps they
6 require a provincial permit. I wanted all the facts to
7 be in the files so that we might be clarified on this
8 point.

9 MR. LANGLOIS: Now, concerning airports and
10 public transport on airports, I think the Federal Transport
11 Board has always considered that it would be a federal
12 proposition and they are the only ones who can indicate
13 who has the concession to do the service and to do the
14 transport between the airport and the town.

15 MR. JACQUES: Because otherwise the taxi which
16 would have the concession on the airport would be able
17 to be used for another service.

18 Q. When did you have this decree of the
19 Public Services Board?

20 A. Our decree was still in force when the
21 Tranpont Board took this over, and we just transferred it.
22 So we have had it for five or six years. I don't know
23 what date. When the Public Services Board existed we went
24 to the Commissioners and we obtained our permit. We were
25 the only one **taxing** in the port of Montreal, so we had
26 a provincial permit to do that. In the Province of Quebec,
27 as I said before, we have an annual permit from the Federal
28 Department.

29 Q. So you also have a Federal permit?

30 A. We have to ask for it every year. In the Por



Kirouac, dir. ex.
(Jacques)

4478

1 of Montreal we have an annual permit and our site on the
2 shore is on the Montreal harbour, so we have to pay rent
3 to the Harbour of Montreal. We are on Federal grounds,
4 so I have to renew my permit with the Federal section every
5 year.

6 Q. Does the building belong to you?

7 A. No. The building is ours, but we rent
8 the land and we have a permit from the Harbour of Montreal.
9

10 THE CHAIRMAN: Now we are on this question,
11 what happens if the Province didn't want to give the
12 permit when the Federal Commission wants to give it to
13 one outfit? I am not asking for an answer; I am just
14 wanting to find out. I am just mentioning that there
15 may be a very delicate situation here.

16 MR. JACQUES: Yes, a very delicate situation
17 has always existed, and the Public Transport Board was
18 able to go around it very well.

19 MR. LANGLOIS: The Maritime Services decides
20 one day to subsidize and sometimes they don't even have
21 a permit from the Provincial Board.

22 Q. So I think for a few years a request
23 has been made to the Transport Board for carrying out the
24 work that you do?

25 A. Yes.

26 Q. Can you recall the facts?

27 A. Yes. Well, of course, as I said, we
28 operate in the Harbour of Montreal and we have our Provincial
29 permit. We have been operating since 1941. In order to
30 protect ourselves, we ask for a Provincial permit, because
we had to go through the Provincial Board in order to do this



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TORONTO, ONTARIO

Kirouac, dir. ex.
(Jacques)

4479

rench
1 type of work although we had a Federal permit anyway.
2 So during the post war years we wanted to give our usual
3 services to the pilots and to everybody, and the post
4 war years were hard ones because the maritime services
5 were not very well developed, there was not too much
6 commerce, trade with Europe and we had losses for three
7 or four years, but we still went on with our service
8 because we still had to supply the service. And then
9 trade has increased and the Seaway was opened, and about
10 two or three years ago somebody has wanted to do the
11 same type of job as we are doing, saying that they would
12 charge half the price, and since I had a Provincial
13 permit I went to see the Provincial Board and asked them
14 since we had a permit to do this type of job, which was
15 a permit, because if you have a competitor who wants
16 to do the same work at half the price and you only operate
17 eight months of the year, we will be in trouble. So
18 we asked the Provincial Board to protect us. It is not
19 a service we can do the whole year out, we can only work
20 eight months of the year, so we made this request, and
21 it seems that the judge in the case said it was not nec-
22 essary to have two services of the same type in the Harbour
23 of Montreal and so far everybody had been satisfied with
24 the Montreal Boatmen Limited and there was no use in having
25 two companies doing the same job, a seasonal job, in the
26 Port of Montreal.

27 Q. That request from a competitor, was this
28 not caused by the fact that your company had refused to
29 give service at midnight on August 17th?

30 A. We never refuse service.



Kirouac, dir. ex.
(Jacques)

4480

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French

Q. Has this anything to do with the transport of passengers?

A. No, it was in another field. So I don't want to give any more details. If you don't want to have any more details, I don't want to give you any.

Q. If it doesn't concern this matter --

THE CHAIRMAN: Before starting, I would like to ask counsel to obtain some information concerning the nature of the company, who has the shares, et cetera. I am asking this not of the Montreal case but because of what we had in other places so that we can compare what we have heard in other cases. You might obtain that from the witness here.

Q. Do you have your minute book, minutes here?

A. You mean --

Q. How many shareholders do you have?

A. Three shareholders. The main shareholder, Mr. Houde, who is the owner, he has 97 per cent of the shares. He has been the owner for quite a number of years, since 1949, I believe. He is the president of the company. He is 65, and he doesn't do anything else.

THE CHAIRMAN: Then you have two other shareholders

THE WITNESS: Josiah Houde, and then Jacques Melançon has the other shares. Mr. Houde has had 97 per cent of the shares for quite a number of years, so he owns the company.

THE CHAIRMAN: Could I have a look at the company's book? I would like to know what type of corporation it is.



FRENCH

C/AG/RPS

THE CHAIRMAN: I would like to know what type

of corporation it is, under what law it is registered,
is there a restriction, or special instructions concern-
ing transfer of shares?

THE WITNESS: It is a provincial charter that
we have had since 1941, under the name of Montreal Boatman
Limited.

CROSS-EXAMINED BY MR. BRISSET:

Q. This \$3.50 charge that you get for carry-
ing the pilot, this is paid by whom?

A. By the shipping company.

ALBERT HOUDE, Sworn

DIRECT EXAMINATION BY MR. JACQUES:

Q. What is your age?

A. 32.

Q. What is your business?

A. Boat service.

Q. How long have you been doing that?

A. For 10 years.

Q. Do you have any other types of jobs, aside
from this one?

A. No.

Q. Could you please give us the dimensions
of the two ships assigned to the transportation of passenger

A. Well, we have Boatman No. 1, which is
entirely steel, it is diesel powered, 85 h.p., a capacity
of 20 passengers, equipped according to the regulations



RENCH

1 of the Department of Transport.

2 Q. Do you have a licence from the Department
3 of Transport for a passenger boat?

4 A. Yes, our boat is registered. We have
5 all permits from the Department of Transport.

6 Q. How many passengers are specified on this
7 permit?

8 A. 20 passengers, including the operator.

9 Q. This is for Boatman No. 1?

10 A. Yes.

11 Q. And for Boatman No. 3?

12 A. It is built of wood, 31 feet long, it
13 is diesel powered, 165 h.p., and it is built according
14 to the regulations of the Department of Transport.

15 Q. How many passengers?

16 A. Well, the same number. 20 passengers.

17 Q. Could you please tell us the number
18 of times that you have transported pilots last year?

19 A. Well, it is quite difficult to determine
20 the exact number. Well, if I had the number of ships which
21 anchored I could tell you right off, for the very good
22 reason that whenever a ship is anchored we disembark the
23 pilot, and whenever the ship leaves we re-embark the
24 pilot.

25 Q. You have heard it said that the transport
26 of pilots represents about one-fifth of your passengers.
27 Is that true?

28 A. Yes, around that figure anyway. We can't
29 say exactly.

30 Q. What do you do during the winter season



French

1 with your boats?

2 A. We do all the repairs in order to be ready
3 for the opening of the navigation season.

4 Q. Is there still some ice in the Montreal
5 harbour?

6 A. Last year we started operating March the
7 25th.

8 Q. Was there ice?

9 A. A lot of ice.

10 Q. Can your boats operate in the ice?

11 A. We have only one steel ship, but we
12 place them behind the oil station so that they will not
13 be broken by ice. Whenever a boat is in we do the
14 service, and as soon as the boat is gone we go behind the
15 oil station again.

16 Q. Do you think the hull of your steel boat
17 has been reinforced for ice?

18 A. Yes.

19 Q. What is the thickness?

20 A. Three-sixteenths of an inch.

21 Q. Where was that work done?

22 A. Well, the boat was a second-hand boat.
23 It had been built for three years, and we made the alter-
24 ations ourselves.

25 Q. What was its name before you bought it?

26 A. I think it had registration number 10T
27 something.

28 Q. Did you do the alterations yourself?

29 A. Yes, for our own particular service.

30 Q. Did you bring about any changes to the



ANGUS, STONEHOUSE & CO. LTD.
TORONTO, ONTARIO

Houde., dir.ex.
(Jacques)

4484

French 1 hull?

2 A. No, the hull remained as it was. Only
3 the upper part, such as decks.

4 Q. Is it a welded hull?

5 A. Yes.

6 Q. Do you know where it was built?

7 A. I couldn't tell you exactly.

8 Q. Do you have radio telephones on board the
9 ship?

10 A. Yes, we have a citizen's band.

11 Q. What is that?

12 A. Well, this citizen's band calls all
13 people who like to operate radio, they can do so, but only
14 with a permit from the Department.

15 Q. Can you communicate with boats?

16 A. No we can't.

17 Q. So what do you do with this radio?

18 A. It is used only if there is an emergency,
19 and we can communicate with the station, in order to get
20 out of trouble.

21 Q. With the station?

22 A. Yes, our own office.

23 Q. So you can communicate from your ship to
24 your office only?

25 A. Yes.

26 Q. And then your office could get in touch
27 with somebody else?

28 A. Well, naturally if something occurs we
29 can easily send another boat to help it.

30 THE CHAIRMAN: You mentioned beforehand that you



French 1 were doing the transport of pilots. I understand that
2 in Montreal harbour there are three types of pilots.
3 You have the St. Lawrence pilots, the Montreal harbour
4 pilots, and also the St. Lawrence Seaway pilots.

5 Are you talking about the transport of these
6 three categories of pilots?

7 A. No, we have only those of the St. Lawrence
8 and the Montreal Harbour. Insofar as the Seaway pilots
9 are concerned we don't transport them.

10 Q. So when a boat is leaving Montreal in
11 order to take the St. Lawrence Seaway, or it is just pas-
12 sing by, you don't take the pilot on board?

13 A. No, only the boats that are anchored.
14 There may be certain occasions where there was an error,
15 for example, in the assignment of a pilot.

16 MR. LALONDE: Just for information, the pilots
17 of the Cornwall District going on the St. Lawrence Seaway
18 embark at the access wall at the St. Lambert lock.

19 THE CHAIRMAN: In winter whenever a boat is
20 anchored you also transport the pilot?

21 THE WITNESS: Well, we don't do any servicing
22 in the harbour in the winter.

23 THE CHAIRMAN: So what happens in the winter
24 whenever you have to go and get a pilot on board a ship?

25 THE WITNESS: Well, in winter the boat goes
26 directly to the wharf.

FRENCH

27
28 ROBERT HOUDE, Sworn

29 DIRECT EXAMINATION BY MR. JACQUES:

30 Q. Could you please give your name and your age



French 1 A. Robert Houde, 55.

2 Q. What do you do?

3 A. I am a pilot.

4 Q. In what District?

5 A. In Montreal.

6 Q. What service do you do?

7 A. Three Rivers to Quebec.

8 Q. Since when have you been a pilot?

9 A. 29 years.

10 Q. I think that you are one of the shareholders

11 of the company called Three Rivers Boatman Limited.

12 Is that true?

13 A. Yes.

14 Q. Are you also a shareholder in the

15 Montreal Boatman Company Limited?

16 A. No.

17 Q. Do you think that the Houdes who are

18 shareholders of the Montreal Boatman are related to you?

19 A. Yes.

20 Q. To what degree?

21 A. Well, Eugene Houde is my brother. Albert

22 Houde is my nephew.

23 Q. Since when have you been a shareholder of

24 the Three Rivers Boatman?

25 A. Since 1951.

26 Q. Since when has the company been established?

27 A. February the 1st 1950.

28 Q. **Has** it been incorporated?

29 A. Yes, by me.

30 Q. Who are the other shareholders of the



1 company?

2 A. I have my wife, who has a share, as well
3 as my secretary.

4 Q. So your wife and your secretary are
5 shareholders, and the rest of the shares are yours?

6 A. Yes.

7 Q. How many shares are there altogether?

8 MR. JACQUES: It is a company with the authorized
9 capital of 250 common shares of a value of \$150 each,
10 and 117 have been issued and paid.

11 Those are the details as at April the 1st
12 1963.

13 Q. And this company, Mr. Houde ---

14 THE CHAIRMAN: While you still have this
15 document, could you please tell us under which part of
16 the Companies Act it falls?

17 MR. JACQUES: I have the balance sheet, but
18 it is not indicated, but if it please the Commission, I
19 will obtain the minutes from the company and I will give
20 the details to the Commission.

21 Q. This is a company which, amongst other
22 things, does the service for the transport of pilots for
23 all ships from Three Rivers?

24 A. Shipping companies only.

25 Q. Could you describe the ships that you have
26 to do such a service?

27 A. Well, we have four launches, and they
28 are registered as Ship Service Boat No. 1, Service Boat
29 No. 2, Service Boat No. 3, and Service Boat No. 4.

30 Q. What are their dimensions?



French 1 A. No. 1 is a boat of 30 by 10.

2 Q. Of wood or metal?

3 A. This one is metal.

4 Q. What type of engine do you have?

5 A. It is a general diesel.

6 Q. What type of equipment do you have?

7 A. What do you mean exactly by equipment?

8 Q. Do you have radar, radio telephones,
9 and so forth?

10 A. No, we don't have any radar or radio
11 telephone. Only the equipment which is required by
12 boat inspectors.

13 Q. Is this boat covered?

14 A. Part of these boats, or the aft part of
15 the boat, is covered, and there is accommodation at the
16 middle of the ship for passengers.

17 Q. Could you please describe the other
18 types of boats that you have?

19 A. We have Service Boat No. 2, which is
20 of the same size as Service Boat No. 1, and Service Boat
21 No. 3 is a boat 42 feet long by 13 feet width, and we
22 have 17 men on board, and this No. 4 is also built in
23 steel for winter service. It is 42 feet long by 14 feet
24 wide.

25 Q. Are the three other boats covered also?
26 Do you have cabins?

27 A. Yes, they all have cabins with the exception
28 of the two boats of 42 feet long. Well, of course, they
29 are larger.

30 Q. Do you have one of these boats which looks



1 after the transport of the pilots?

2 A. Yes, No. 3, No. 4, and No. 2.

3 Q. So one of the larger boats is specially
4 for the transport of pilots. Does it do only the
5 transportation of pilots?

6 A. No, well, they may transport customs
7 officers, boat agents, and so forth.

8 Q. Are their trips restricted between their
9 stations on land and a ship that is going to pass in the
10 river?

11 A. Yes, but if there is an accident in the
12 river, if a boat runs aground or so forth, well naturally
13 we go further down a few miles between Quebec and Three
14 Rivers, but only for pilots when they are in the harbour.

15 Q. Could you please tell us the age of these
16 vessels?

17 A. No. 2, or No. 1, dates back from 1950,
18 and No. 2 in 1952, No. 3 in 1955, if I remember correctly,
19 and No. 4 about three years ago, 1959, 1960.

20 Q. Did your company have these boats built
21 especially for your own use?

22 A. Yes, our company built these boats for
23 its own use, with the co-operation of another company,
24 called Houde et Bergeron.

25 Q. What is Houde et Bergeron?

26 A They are builders of small boats.

27

28

29

30



French 1
/PE/RPS 2

Q. Do you have a permit issued by the
Department of Transport for the transport of passengers?

A. Yes. Each of these boats has a certificate
from the Department of Transport.

Q. For how many passengers?

A. Well, No. 2 and No. 1, we have six
passengers plus three members of the crew, and No. 4,
12 passengers with two crew members.

Q. Now, how many crew members do you have
in fact on these boats?

A. We have two crew members on each boat,
which is recommended by the Department of Transport
Inspection Service. We could not navigate without
having two crew members.

Q. Are your boats at the disposal of pilots
and other passengers 24 hours a day?

A. Yes.

Q. How many crew members do you have as a
whole?

A. Well, including our staff in the office
and those who take care of maintenance, we will have
15.

Q. How many of them are crew members?

A. Well, we always have three on duty.

Q. On duty where?

A. Well, on boats and at the station.

Q. Well, this makes a total of how many?

A. Well, three. We have three shifts per day,
so we have four ships on duty, but there are always three
crew members on duty 24 hours a day.



1 Q. During the nighttime how many members
2 of the staff are at your disposal?

3 A. Well, they are all at our disposal.

4 Q. But in fact how many do you have at the
5 station?

6 A. There are three that work. They have their
7 special quarters. They have room and board at our station.
8 They stay at the station.

9 Q. You say that you have three crew members?

10 A. There are always three crew members on
11 duty on each shift.

12 Q. What do they do when they are on duty?

13 A. Two of them are looking after the transport
14 of pilots and the other one is on the alert and his
15 radio telephone and whenever somebody needs someone, as
16 the signal service is going all the time. Two are taking
17 care of the pilots and the other one answers the phone
18 and is on the alert.

19 Q. Well, for example, if they want to do an
20 exchange, the other one leaves with another launch?

21 A. Well, you always have one boat at the same
22 time. Now, we take another crew member who is not on the
23 shift but who may work then.

24 Q. You have talked about a station. To whom
25 does it belong and where is it?

26 A. The Three Rivers Boatman has an office
27 that has a waiting room, which has a telephone and all
28 necessary accessories, where pilots can wait for the boat.

29 Q. And where is that located?

30 A. At Pointe des Ormes, in Three Rivers, on the



French 1 lock that belongs to Robert Houde,
2 Q. And the building, did it belong to Montreal
3 Boatman?
4 A. No. It belongs to Three Rivers Boatman.
5 Q. And the ground?
6 A. It belongs to Robert Houde himself and it
7 is rented to the company, who pays.
8 Q. That means you have rooms for your crew
9 members?
10 A. We have them.
11 Q. Where do you have them?
12 A. In the pilots' hotel. I have a hotel there
13 where I can put my employees and pilots if they want to
14 stay overnight.
15 Q. So on your land at Three Rivers you have
16 a station and you have a hotel for pilots. How many rooms
17 do you have for pilots?
18 A. Sixteen rooms available for pilots.
19 Q. Is there a diningroom?
20 A. Yes, there is a diningroom.
21 Q. And pilots stay there when they are waiting
22 for the ships?
23 A. Not all.
24 Q. When was this built?
25 A. In 1955, when the opening of the station
26 at Pointe des Ormes was made.
27 Q. To whom does it belong?
28 A. **It** belongs to Robert Houde personally.
29 Q. Are you the only person concerned?
30 A. Yes, sir.



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Q. And your crew lives there too?

A. Most of them eat there. They have their rooms there.

Q. Can you explain how you do your dispatching? Who gives you instructions to go and get the pilots or take them back?

A. Well, we get information at the signal office desiring a pilot and we are told the time the ship arrives and the pilot who is to go to the ship comes to our launch and we take him to the ship.

Q. And this is always how it goes on?

A. Yes, 24 hours a day that is how it goes on.

Q. Do you have a permit from the Provincial Transport Board?

A. Yes. We have a permit from the Quebec Provincial Transport Board.

Q. Do you remember when you obtained this?

A. I obtained this in 1951.

Q. Were there other requests for permits for these services?

A. Not that I know of.

Q. How much do you charge for a boat trip?

A. The cost would be \$10.00 to take a pilot and bring him back.

Q. What is the value of your four boats?

A. No, 1, \$3,500.00.

Q. Is that the depreciated value in your balance sheet?

A. No. This is what they cost. No. 2, \$7,000.



1 No. 3 \$10,480.00 and No. 4 \$24,132.61.

2 MR. JACQUES: At this stage, I wonder if the
3 Commission would like to see the balance sheet of these
4 two companies?

5 THE CHAIRMAN: No. It is not necessary. The
6 only thing I wonder is, you have here also a Provincial
7 Board permit. Now, are the ~~feet~~ specified here?

8 MR. JACQUES: According to the laws of the
9 Board, tariffs have to be registered and no change can
10 be made to those tariffs without the consent of the Board
11 and anything over and above what has been established is
12 illegal.

13 I shall bring to the Commission the ordinances
14 of the Transport Board on those two services. I have
15 in hand already the file of the request made in Montreal
16 and related by Mr. Kirouac of Montreal Boatman Limited.

17 THE CHAIRMAN: Because the witnesses for the two
18 companies have mentioned that tariffs for transport of
19 pilots have been established with the consent of the
20 Shipping Federation and I suppose this is only a preliminary
21 but the final decision comes from the Transport Board.

22 MR. JACQUES: Yes. The Commission will have in
23 front of it all the details having to do with this matter,
24 and these come from the Quebec Provincial Transport Board.

25 THE CHAIRMAN: It is not the question of whether
26 this is too expensive or not. It is just to know how the
27 mechanism operates.

28 Q. Concerning the operation of **your** ships for
29 the pilotage service, does this \$10.00 cover that?

30 A. Yes, since if it had not been enough, well,



French 1 we would not have been staying in business.

2 Q. Well, you might have been able to cover
3 that one operation with the profits from another sector?

4 A. Well, it is an adequate. When we started
5 to operate in 1950, the rates were not so high. So
6 salaries have increased and we have corresponded with the
7 Shipping Federation and we have asked for an increase and
8 we have obtained from the Shipping Federation the possib-
9 ility of asking for more, and a few years later we were
10 asking to increase the crew. We only had two men on duty.
11 Now we have another one. So we have three men on duty.
12 And here we explained our case to the Shipping Federation
13 once more and they allowed us to increase our rate to
14 \$10.00 because we have an extra crew member. Since then
15 we have had no changes.

16 Q. Without giving the names, I should like to
17 know if the capital necessary to your business has been
18 put into the firm only by yourself?

19 A. You mean in this enterprise? Do you mean
20 in the boat enterprise? At the beginning, I started this
21 business myself. If you have noticed a while ago, all
22 launches did not come out at the same time and the company
23 paid for those launches.

24 Q. Now, the shipowners or the representatives
25 of the shipowners, have they any interest in your company
26 as an investor, as a shareholder giving guarantees?

27 A. No.

28 Q. Are these corporations only used to guarante
29 credit that you might have requested?

30 A. No.



French 1

Q. Are you the only pilot interested in

2 this business?

3 A. Yes.

4 Q. Do you supply services in the winter?

5 A. Yes.

6 Q. With what boat?

7 A. With service boat number 4.

8 Q. Was it built for giving service in the

9 winter?

10 A. Yes. It was built for winter service.

11 Q. Can you describe the accommodations avail-

12 able on the ships, for the pilots?

13 A. It is only one room, which is protected

14 by wind and waves.

15 Q. Is there any food available?

16 A. No.

17 Q. No coffee?

18 A. No. In this sort of waiting room at the

19 hotel, yes, we have all these things available.

20 Q. Is the waiting room combined with the hotel?

21 A. No. It is independent.

22 Q. Is it far from it?

23 A. About 50-75 feet, one from the other; so
24 a pilot can go to the hotel when he is in the waiting room.

25 Q. Is your dining room open 24 hours a day?

26 A. No. The main room, no; but the small room
27 is open for my employees and for pilots who want to have
28 coffee and a sandwich.

29 MR. JACQUES: Thank you. Your witness.

30



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1 CROSS-EXAMINATION BY MR. LALONDE:

2 Q. Mr. Houde, your station is close to the
3 pilotage station?

4 A. The company has done a very good work, so
5 --

6
7 ---OFF THE RECORD DISCUSSION.
8

9 MR. JACQUES: The Commission might find it
10 convenient to adjourn for a few minutes.
11

12 ---SHORT RECESS.
13

14 MR. JACQUES: One last question. Could you
15 please bring your minute book for next week?

16 THE WITNESS: Yes. I am going to do that.

17 THE CHAIRMAN: All the information contained
18 in that book of minutes is strictly confidential.

19 THE WITNESS: Thank you.
20

21 CROSS-EXAMINATION BY MR. LALONDE: (Continued)

22 Q. Mr. Houde, you have a special station for
23 your pilot vessels. Is that station near the pilotage
24 station operated by the Department of Transport?

25 A. The station operated by the Department of
26 Transport is about two or three hundred feet from ours.

27 Q. When pilots board your launches, do they
28 do so from a wharf of the Department of Transport or at your
29 own wharf?

30 A. Not always. Sometimes, especially in this



1 period of the year, due to the fact that the water is
2 very low. We found that with the water about 20 feet in
3 depth we could not operate our own basin, which is
4 under construction at the present time.

5 Q. Are pilots embarking at the pilotage
6 station?

7 A. Yes. At the Department of Transport there
8 is a wharf at that place and naturally the water level
9 leaves something to be desired because the depth is not
10 sufficient. At the end of the quay or the wharf, there
11 is only 80 inches of water at the present time.

12 Q. And this wharf was built by the Department
13 of Transport?

14 A. Yes. It was built upon our request, with
15 the support of the Shipping Federation and the Pilots'
16 Federation.

17 Q. Do you think that the pilots embark usually
18 at the wharf of the pilotage station of the Department
19 of Transport?

20 A. Yes. Well, when the water is deep enough
21 at our own wharf, we prefer to do it because the distance
22 is not as long, because the government's wharf is about
23 500 feet; while we have only 200 feet to go.

24 Q. So you will have some pilot who will leave
25 this pilotage station and will go on foot to your own
26 wharf?

27 A. The pilots by-pass the Department of Trans-
28 port in the first place and then they come to the station
29 by my own company in order to board our launch.

30 Q. I would like to ask you if there were any



1 pressures or representations made by the Pilots' Assoc-
2 iation in order to obtain certain privileges, either
3 directly or indirectly?

4 A. No.

5 Q. You mentioned that the transport cost was
6 \$10.00 in Three Rivers. Is that for a two-way trip?

7 A. No. There is an exchange. We take one
8 pilot to a ship and we bring back the other one.

9 Q. So you charge \$10.00 and in fact you
10 transport two pilots?

11 A. That is true.

12 Q. You mentioned that there was no means
13 of communications on board your launches?

14 A. Well, we have a permit for a radio tele-
15 phone but we have interrupted that while we go on paying
16 the permit because we have certain employees or pilots
17 who were really making an abuse because they were making
18 too many calls. So we have interrupted that practice.

19 Q. Do your launches go out often at night?

20 A. Well, every time we have a request from
21 a boat.

22 Q. Do your launches go out as often at
23 nighttime as in the daytime?

24 A. More often at nighttime.

25 Q. If there is an engine failure on board your
26 launches, for one reason or another, what means of commun-
27 ication do you have in order to notify either the pilotage
28 station or your own station or a boat to the effect that
29 you are in trouble?

30 A. We have a supervisor who looks after the



ench

1 functioning of our launch when the exchange is made.

2 Q. Well, this supervisor is on ground?

3 A. Yes.

4 Q. And during the nighttime?

5 A. Well, the same thing happens.

6 Q. Well, I understand that we may follow this
7 from the ground, during the daytime, in Lake St. Peter,
8 in order to find out what stage the launch is; but is it
9 easy to follow its operations at nighttime?

10 A. The launch is equipped, according to
11 the international regulations concerning navigational
12 lights; consequently you always have a supervisor on the
13 ground on duty at all times.

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1 Q. Do you have some distress signals on
2 board the launches?

3 A. Well, the equipment of our launches is
4 according to the requirements of the Vessel Inspectors
5 of the Department of Transport.

6 Q. So you have some distress signals, what
7 are called English red flares?

8 A. We do have these red flares on board.
9

10 BY MR. JACQUES:

11 Q. The \$10.00, is it paid by the Pilotage
12 Authority or by the ships' agents?

13 A. It is paid by the shipping companies who
14 are the shipowners more or less.

15 Q. Who takes care of the collection of these
16 dues?

17 A. Well, me and my secretary.

18 Q. Ever since you have been operating your
19 service have you lost many accounts?

20 A. Well, it so happened we had some bad
21 debts, but we don't have great losses. I think one year
22 we lost about \$160.00.

23 Q. And your bills are paid in what delay,
24 usually?

25 A. Well, most companies, the regular companies
26 pay within ten to fifteen days. Some companies may take
27 six or seven months to pay us.

28 Q. Six or seven months to pay?

29 A. Yes.
30



CROSS-EXAMINATION BY MR. LALONDE: (Continued)

Q. Now, so far as this position is concerned for the arrival of ships at daytime and nighttime, this watching, within your organization is that the responsibility of your pilot or is your supervisor responsible for watching for the arrival of ships?

A. Well, we are advised by the Department of Transport, the Office of Dispatch of the Department of Transport, and naturally we keep watch, and as soon as there is an approach of a ship we ask a pilot to look after that.

Q. Is that the responsibility of the pilot or the supervisor?

A. Well, we don't really have the responsibility concerning that. If the pilot is late, well, we are going to transmit a message to the effect that the pilot is late or something is wrong, so that the other pilot will put him in a safe place with his ship.

CROSS-EXAMINATION BY MR. LANGLOIS:

Q. Is there a written contract between you and the Shipping Federation for the running of your ship?

A. Yes, we have an official contract.

Q. Is it a long-term contract?

A. No. It has been determined by the Shipping Federation.

Q. You don't have any protection concerning the duration of your contract?

A. No.



1
2
3 Q. Now, I understand that you collect your-
4 selves your dues. This is not done by the Shipping
5 Federation?

6 A. No, it is done directly by ourselves.
7

8 CROSS-EXAMINATION BY MR. BRISSET:

9 Q. Mr. Houde, what is the distance covered
10 by your launch in order to get the pilot starting from the
11 wharf to the ship?

12 A. Well, it is never the same course. Usually
13 we have to cover about two miles, up to two miles
14 sometimes. The distance may be shorter because the boat
15 is in a better position or the pilot can disembark faster,
16 and so forth.

17 Q. Now, when you conclude an agreement with
18 the Shipping Federation concerning the rates, do you
19 apply later on to the Department of Transport to see that
20 this rate is approved?

21 A. It is the Provincial Transport Board with
22 whom we have a contract. Whenever the rate is changed and
23 we get an increase, the Board is notified each year and
24 we send to the Board the certificate of each launch in order
25 to prove that we follow entirely the by-laws of the Depart-
26 ment of Transport.

27 Q. When you notify the Board of a change in
28 rates, I suppose you also notify the Board that the Shipping
29 Federation approves this change?

30 A. Yes, we notify the Board that way, saying that :



ench 1 we have been granted a new rate by the Shipping Federation,
2 and the Dominion Marine or the Ottawa Department of Trans-
3 port.

4 THE CHAIRMAN: No further questions?

5 MR. JACQUES: Thank you. Mr. Phipps Walker,
6 please.

7
8 EDWARD PHIPPS WALKER, Sworn

9
10 DIRECT EXAMINATION BY MR. JACQUES:

11 Q. Would you state your full name and age,
12 please?

13 A. Edward Phipps Walker, 49 years of age.

14 Q. And what is your occupation, sir?

15 A. I am the Harbourmaster of the Port of
16 Kingston.

17 Q. How long have you occupied that position?

18 A. Since 1957.

19 Q. And prior to 1957 what was your occupation?

20 A. I was the Pilotage Officer, Kingston.

21 Q. And how long were you Pilotage Officer of
22 Kingston?

23 A. From 1953 until 1957.

24 Q. And prior to 1953 did you have any exper-
25 ience at sea?

26 A. I was in the Royal Canadian Navy.

27 Q. For how many years?

28 A. I am on the retired list now. I retired
29 in 1950.

30 Q. What ~~rank~~ did you attain in the Royal Canadian



lish 1 Navy?

2 A. I was Lieutenant Commander, Engineer; I
3 was not a deck officer.

4 Q. You were not a deck officer, you were an
5 engineer?

6 A. Yes.

7 Q. Would you first describe the limits of
8 the harbour of Kingston?

9 A. Sir, on August the 16th, 1957, there was
10 an Order in Council making Kingston a public harbour under
11 the Federal Government. Prior to that it was owned by
12 the City. At that time they laid out these various lines
13 for the harbour limits.

14 Would you like me to draw them on the chart?

15 Q. Yes, if you please.

16 A. It is all written down here, the technical
17 side of it.

18 Q. You might draw it on Chart 1459, filed
19 as Exhibit 465.

20 A. It goes from the light at Carruthers Point
21 to Cedar Island light. It is a very long, narrow harbour.
22 The other line is in the upper harbour; it is just below
23 our sewer line here. There is only two feet of water up
24 there.

25 Q. Might I show this to the Commission?

26 Now, these are the limits of Kingston harbour as
27 shown on Chart 1459; is that correct?

28 A. Yes,

29 Q. And your jurisdiction as Harbourmaster is
30 within those limits?



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A. Yes, sir.

Q. Would you now describe your duties as Harbourmaster, please?

A. I have given the copy of the Act there, the transcript. All my duties are laid down in the Canada Shipping Act and by the Federal Government.

I look after everything that would happen in the harbour, from sick sailors to arranging for docking, winter storage. There is nothing that I actually don't deal with in various forms. The other day I had a dead cow in the harbour and it had to be removed and it was outside the city limits and I had to negotiate the thing with the city.

Q. Your duties are those laid down in the public harbour regulations published in the Canada Gazette of January, 1955, under Order in Council PC1954-2073 of 31st December, 1954; is that correct?

A. Yes.

Q. Would you briefly give the Commission a summary of these duties, please?

A. As I was saying just now, the duties concern anything to do with shipping, not only the commercial shipping but also private yachts, and, of course, we are a very busy harbour in private boats because the Rideau Canal traffic is very large; the smaller boats can proceed up to Kingston when they are not allowed to go into the Seaway because of their size.

Q. Now, sir, do you control the movement of vessels in your harbour?



English

1 A. Yes.

2 Q. Would you indicate to the Commission how
3 you control these movements?

4 A. When I say I control them, when they
5 want to dock, the captains come in and say: "We want
6 to go at such and such a time." We have a very big coal
7 and fuel trade in Kingston. I know when these ships are
8 coming in and when they are going, but if they are wonder-
9 ing about draught or anything I do everything I can to
10 help them.

11 Q. Do you assign ships to the various docks
12 in the harbour?

13 A. I do. For instance, say there is a
14 breakdown of repairs, they will ring me up on the radio
15 telephone, on the ordinary telephone through the radio
16 station and ask me what is the best dock to go to, and
17 I meet them at the dock and take them in.

18 Q. Do you do that only on request?

19 A. Yes.

20 Q. Do you have anything to do or do you do
21 anything in respect to actual traffic in the harbour, if
22 and when and how it should move?

23 A. The only thing I have to do with that is
24 in connection with speeding and infractions ~~like~~ that.
25 Water skiing is not allowed in the harbour, and on quite
26 a few occasions people have been under the influence on
27 boats.

28 Q. Do you define anchorage limits in the
29 harbour?

30 A. The ships do not actually anchor in our



English 1 harbour; they anchor over on the other side here. It is
2 very, very narrow, as you can see.

3 Q. So they will not anchor within the harbour
4 limits?

5 A. The only ships which anchor in the harbour
6 are military craft, and they anchor here in Cedar Island.
7 But commercial ships wouldn't be interested in that be-
8 cause it is under the military college.

9 Q. Do you control the time at which ships must
10 move within the harbour?

11 A. No, they move on their own. The only thing
12 I do is, naturally, if a freighter comes in I want to know
13 when he will move. A boat that is lying alongside for
14 any length of time is charged by the government side
15 wharfage.

16 Q. Do you request pilots to let your office
17 know of the times of arrival of the ships they pilot and
18 also the times of departure of the ships they pilot?

19 A. Yes. The reason I know that information
20 is that Canadian ships or American ships don't carry
21 pilots; only the overseas deep sea types use pilots, and
22 I have to go down and examine their papers. If they
23 haven't paid their harbour dues, I collect money for the
24 Receiver General. I get that information from the captain.

25 Q. The pilots would not pass on this infor-
26 mation to you as a matter of practice?

27 A. No. Well, usually I just talk with the
28 captain by radio, the exact time of arrival.

29 Q. Are there any particular difficulties
30 in moving a ships within the harbour because of tides and



lish 1 currents and thingslike that?

2 A. We have very bad winds periodically, and
3 we are very lucky that we have two companies with tugs in
4 Kingston, McAllister Tow Company and Canadian Dredge and
5 Tug Company. So we are very well off for tugs.

6 Q. Do you, in periods of bad weather or very
7 strong wind, restrict the movements of ships within the
8 harbour for safety's sake?

9 A. We really don't get into the position where
10 we have -- for instance, if a ship is going inside the
11 causeway to the coal yards here and it is very bad weather,
12 they will automatically order the tugs. It is very
13 rare it happens. And they use tugs to turn in this
14 turning basin inside.

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Q. As regards speed, have you adopted any regulations concerning speed within the harbour?

A. The limit is eight miles an hour.

Q. Do you take measures to see that this speed is adhered to?

A. Yes.

Q. What measures do you take?

A. Well, I notify every one of the power squadrons, the local yacht clubs and mariners. I talk quite a lot to local groups, and I notify them.

Unfortunately, there is quite a muddle on the speed limit at the moment. The Royal Canadian Mounted Police have a vessel stationed, called "Cut Knife", and the corporal in charge charges quite a number of people for speeding under our bascule bridge, you know they come dashing through and there is something the other side and bang. They were not able to prosecute, because apparently the eight miles an hour only applies to commercial vessels, and they also say that if some of these little boats go quite slowly it is quite dangerous if the water is rough. They are better off going fast than slow, and they had to drop these cases

Q. As regards commercial vessels, do you check on their speed in the harbour?

A. Yes. Well, you can pretty well tell. Actually, I hate to say this, but very few of the vessels coming into the inner harbour will only do about eight knots, and nobody will go very fast entering this area because of the bridge.



1 Q. So there is no particular problem with
2 the speed of vessels?

3 A. No, the only people who have broken the
4 law there, I regret to say, is the Navy, with their
5 destroyers and so on.

6 Q. Is the radio-telephone used at all in
7 Kingston, for the movement of ships, of course?

8 A. All the tugs are equipped with radio-
9 telephones, and also the pilot boats run by Mr. Dubin.
10 I have no radio-telephone, because the D.O.T. radio
11 station there, if I want a message put through that is
12 commercial, they will do it for me at no charge. But
13 if I have to talk to the captain about a message from
14 his owners, or something, I have to go through the
15 Bell Telephone on a \$1.50 call.

16 Q. Do you request that security watches
17 be kept by pilots on ships within the harbour?

18 A. The only time we have had pilots
19 aboard ocean-going vessels at anchor was in case of
20 very, very bad weather, and we did have the "Gustav
21 Heinrich Wieter", a German ship, loaded with bulk
22 styrene, the first time they ever used it from Sarnia
23 in bulk form. The pilot was kept on when they anchored
24 at night.

25 Q. Had he stayed on board at your request?

26 A. No. He was actually the lake pilot,
27 or sailing master.

28 Q. You were asked to prepare a report on
29 the accidents to port installations caused by vessels in
30 the last five years, indicating whether the vessels were



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1 A. There was a pilot on board. Do you
2 want his name?

3 MR. JACQUES: No.

4 THE WITNESS: Yesterday, sir, I noticed that
5 you were talking about the business of the difficulty with
6 the language. This was rather interesting, what happened,
7 and why this happened. The pilot boarded at the elevator.
8 From the elevator to that buoy is the St. Lawrence District
9 Pilotage area, not the harbour limits, and the captain
10 was standing on the bridge with the pilot. Now, he didn't
11 realize that when he got to the pilotage limits that from
12 there to Cape Vincent he was on his own and then at
13 Cape Vincent he would start to be piloted again. The
14 pilot was standing beside him, and the captain thought
15 he was piloting, and he didn't speak very good English,
16 and the pilot thought the captain was doing it, and
17 bang, they were on the rocks

18 Q Did you investigate this accident?

19 A. I contacted Capt. Slocambe or Capt.
20 Jones about it, and from then on I told the pilots to
21 make sure that they told the captain out there that
22 they were not going to pilot unless he requested them
23 and paid them extra.

24 Q. I want to know if you know these facts
25 of your own personal knowledge, or after having carried
26 out an investigation in your official capacity, or it
27 may just be hearsay?

28 A. To my own personal knowledge, I saw
29 it happen, and I knew what happened to the pilot when the
30 tugboats went out. It wasn't a bad grounding. It was just



1 sitting there.

2 Q. But the explanation for the grounding?

3 A I found that out afterwards.

4 Q. In your capacity as Harbourmaster,
5 or was it just hearsay, or something told to you in the
6 course of conversation?

7 A. Well, I learned it from the owners,
8 because naturally they began checking. Montreal Shipping
9 were the agents. I couldn't understand the captain
10 myself anyway.

11 Q. ~~Was~~ it your duty to carry out an inves-
12 tigation at that point?

13 A. No, because he was not in the harbour
14 limits. I have nothing to do with the pilotage area.

15 Q. Thank you. Will you pass on to the
16 next accident, please?

17 A. This next one was an unusual one, of a
18 vessel being towed from Kingston to the scrapyards in
19 Hamilton.

20 Q. When did it happen?

21 A. November the 22nd, 1950.

22 Q. Where?

23 A. On the far side of Wolfe Island here,
24 across from the harbour. This really was not --- what
25 happened was that the vessel was being towed. They got
26 into terrible weather. It was the old "Collier", with
27 a small tug, and it became so dangerous with only one
28 foot draught forward and about nine aft, that the
29 captain went aboard the old wreck and let go both anchors.
30 Meanwhile we had a distress signal from an American vessel



1 in trouble and the tug went off to assist. During the
2 night she broke away from her anchors and went 22 miles
3 up on her own to May Island. It cost thousands to get
4 her out again.

5 MR. BRISSET: May we ask the name of the
6 ship?

7 THE WITNESS: The name of the ship was the
8 "Collier", and the tug was "James Stewart".

9 MR. LALONDE: May we also ask whether there
10 was a pilot on board?

11 THE WITNESS: There were two captains on
12 board, one of whom I know.

13 Q. Was there a pilot on board?

14 A. No, there was not.

15 The next accident was in September 1961, with
16 the S.S. "Bayanna" in the inner harbour, that is above
17 the bascule bridge. He was coming up to the coal dock,
18 and backed into the Pike Salvage barge number 1. There
19 was \$4,000.00 worth of damage to the "Bayanna".

20 Q. And the barge?

21 A. Yes, between the two of them it was
22 only \$4,000.00.

23 Q. Was there a pilot aboard the "Bayanna"?

24 A. No, it belongs to Bayswater Shipping.

25 The next one was "Imperial Simcoe", on December the 19th,
26 1961. It was proceeding from the inner harbour. I think
27 it was around 2130. He called me by radio to say he had
28 cast an anchor under the Lasalle Bridge. I went down
29 right away. We couldn't do anything until morning
30 with divers, and the bridge arms for stopping traffic we

1 had to bring them down manually, and in the morning we
2 found that the electrical conduit, the submarine cables,
3 had been severed, and the three Bell Telephone lines were
4 broken, between Montreal, Ottawa, and the Army camp, and
5 we had the bridge up four days to get it all fixed.

6 Q. Do you know why she dropped an anchor
7 there?

8 A. One of these errors. They were turning
9 on their anchor in the inner harbour, and something went
10 wrong. The captain thought everything was okay, and the
11 first thing he knew was when this terrible wrench happened.
12 That cost \$15,000.00.

13 Q. Was there a pilot aboard then?

14 A. No. That was \$15,000.00 for the damage
15 to the electric wires, the Government wires and the under-
16 ground cables. The Bell Telephone cable, I don't know
17 what the cost was.

18 The next vessel really wasn't in the harbour.
19 She was outside. The M.V. "Dealmouth".

20 Q. Are you also the wreck receiver?

21 A. No, my assistant, Mr. Barrett is the
22 Receiver of Wrecks; but I am also the Wharfinger of the
23 Docks.

24 Q. Could you give us what was in your
25 report, please?

26 A. All I know was that an American pilot
27 was aboard.

28 Q. What nationality was the ship?

29 A. British.

30 Q. What was the nature of the casualty?

1 A. It was grounded.

2 Q. Grounded where?

3 A. On the Portsmouth Ranges there

4 Actually, at this moment they are altering these ranges.

5 I think it is something to do with draught. I don't

6 attend these inquiries. At the moment we have the

7 hydrographic vessel "Cartier" there, and I think

8 definitely there was not enough water, and he was slightly

9 off his range lights too apparently. They got him off

10 and she went ashore a second time a few minutes afterwards.

11 MR. BRISSET: May I ask the date of the last

12 one?

13 THE WITNESS: September, 1962, sir.

14 The next one is the Crystal Sapphire".

15 Q. What nationality?

16 A. British.

17 Q. When did the accident happen?

18 A. November the 21st, 1962.

19 Q. Was there a pilot on board?

20 A. There apparently should have been, but

21 I see there was not one.

22 Q. What sort of an accident was it?

23 A. It was on the west side of the elevator,

24 and they were moving the ship from the west side to the

25 east side, and in bringing her around she hit the grain

26 tower.

27 Q. What time was it? Was it daylight hours?

28 A. Daylight hours, yes.

29 Q. What was the weather like?

30 A. I am just trying to think. Overcast.



1 It was 0800 in the morning. It damaged the tower; I
2 don't know the extent. Canada Steamship Lines never
3 disclosed it. The ship had no damage at all.

4 Q. And the next one, please?

5 A. The next one was April the 26th, 1963,
6 the "Coastal Carrier", owned by Transit Tankers, hit the
7 Soward coal dock in the inner harbour. It is very hard
8 to manoeuver in there. I don't know how on earth he got
9 in, or out. There were lots of dredges and equipment in
10 there. It was in the early Spring.

11 Q. Was there a pilot on board?

12 A. No.

13 Q. Did the accident occur during daylight
14 hours, or darkness?

15 A. At dawn, and it was only wood piling,
16 but wood piling is very expensive. It was \$4,000.00
17 damage **approximately** to the piling.

18 Q. Do you know what the probable cause
19 of the accident was?

20 A. I think it was just a tight squeeze.
21 Actually \$4,000.00 is not very much when you start hitting
22 it with a ship.

23 The next one was on May the 1st, 1963, the
24 S.S. "Bayfair", of Bayswater Shipping Limited, damaged
25 the Government dock on Lasalle.

26 Q. How did it happen?

27 A. In this turning basin back here when the
28 wind got **him**. That is what we thought it might have been.
29 Mr Walters, who was here yesterday, they made the claim
30 against him for the Government dock. It was \$4,000.00.



1 Q. Damages to the ship?

2 A. No, to the metal sheathing of our dock.

3 S.S. "Bayanna" ----

4 Q. Was that the same?

5 MR. LALONDE: Was there a pilot on the last
6 one?

7 THE WITNESS: No. The "Bayanna" damaged the
8 Soward dock again for \$2,000.00 damage. They are always
9 damaging this dock.

10 Q. Was there a pilot aboard?

11 A. No.

12 Q. When did the accident happen?

13 A. I think it was during the night.

14 Q. Do you know what the probable cause of
15 the accident was?

16 A. It is the same area where the "Coastal
17 Carrier" hit. It is very crowded with equipment. These
18 docks and the basin are private, and they dredge their
19 own area. It actually happened in their own private
20 basins.

21 Q. Do you have to attend inquiries into
22 shipping casualties when port installations are involved?

23

24

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1 A. No. Well, in the case, for instance,
2 of this Government dock being damaged, Mr. Walters, the
3 district engineer who was on the stand yesterday, would
4 come down to Kingston and ask me what I knew about it
5 and it is just between the two of us and then write a
6 letter to Bayswater Shipping.

7 Q. Now, are you called upon to attend in-
8 quiries into shipping casualties within the Seaway
9 limits, whether port installations are concerned or not?

10 A. I have never really had anything
11 happen that has been serious enough. We have a ship there
12 now in dry dock and there is another one but it has
13 nothing to do with my harbour and there was a board in-
14 quiry by the Department of Transport, held on board last
15 week, but I wasn't invited. It was nothing to do with
16 me.

17 MR. JACQUES: Thank you very much, sir.

18 MR. LALONDE: My lord, since the witness has
19 prepared a report which he has extensively read, I do
20 not know whether he has read everything in that report,
21 or whether it should be tabled for the examination of
22 the Commission.

23 MR. JACQUES: And before my learned friend
24 requests that, I should like him to have a look at the
25 papers which the witness has because they are report
26 forms and some of the notes are in shorthand. I have
27 no objection to their being filed, but I should like
28 him to have a look at them first.

29 THE WITNESS: I will have to apologize for
30 this, because this letter --- I have the envelope over



1 there --- arrived unsealed and it was in my car and I
2 couldn't find it. I thought it was some advertising and
3 it wasn't sealed up or anything. Those are customs ones.

4 MR. LALONDE: I do not need these documents
5 myself. I do not know whether my colleagues think they
6 should be filed.

7 THE WITNESS: I can type them all out later,
8 if you like.

9 MR. LALONDE: I do not insist upon their
10 production.

11
12 CROSS-EXAMINATION BY MR. LALONDE:

13
14 Q. If I understood you well, Mr. Walker,
15 all of the accidents you mentioned, in seven cases,
16 there was no pilot on board and in the eighth case the
17 pilot on board was an American pilot?

18 A Yes.

19 Q. And in the ninth case the accident
20 occurred, in fact, outside the pilotage district itself?

21 A. That is correct.

22 Q. And the version of the accident which
23 you gave to this Commission, as to the actual immediate
24 cause of it, you obtained from the ship agents in Montreal?

25 A. Yes. And I spoke with the pilot
26 afterwards, because he was very upset about it and he
27 thought the captain or the pilot --- It was just one of
28 those things --- unbelievable. There was very little
29 damage.

30 Q. Let us come to the "Collier".



1

A. The "Collier", yes.

2

Q. It was pulled by a tug?

3

A. Yes.

4

Q. And this tug is the "Green Stewart"?

5

A. "James Stewart".

6

Q. Wasn't that tug --- do you know who was

7

responsible for the operation of that tug at the time ---

8

not his name, but do you know who was responsible?

9

A. I know who the two captains were.

10

Q. There were two captains on your tug?

11

A. Yes.

12

Q. In what year was that? You mentioned

13

1960. Is that it?

14

A. It is so faint here. Just a second ---

15

November 22nd, 1959.

16

Q. The persons in charge of the tug were

17

not employees of the Department of Transport at that

18

time?

19

A. No. I was talking to the two captains

20

afterwards and their attitude was that there was no one

21

aboard the ship and there was an S.O.S. call went out

22

for them.

23

Q. The channel north of Wolfe Island has

24

been deepened recently, I understand?

25

A. Yes.

26

Q. And that is in the western part of Wolfe

27

Island, between Wolfe Island and the Canadian mainland?

28

A. It is Quebec Head, the channel at

29

Clayton, New York.

30

Q. Well, how deep is the channel now over



1 there?

2 A. It is 23 feet. It was swept to 23 feet
3 at chart level 243.

4 Q. Is there any dredging taking place at
5 that particular area?

6 A. There will be, I think, from what I
7 understand. But actually we went --- a British ship went
8 through the other day and they sounded it for me --- the
9 Manchester Mariner --- very carefully and they found in
10 many places 28 feet and the water is at 3 feet at the
11 moment.

12 Q. Would you say that a large number of
13 ships using the Seaway could pass through that channel?

14 A. Yes.

15 Q. Previous to 1960, did most of the
16 ships use that channel?

17 A. All the overseas ships came through
18 Kingston --- every one of them.

19 Q. Until what year?

20 A. Until last Spring, 1962.

21 Q. What was the cause for the change? Where
22 do they pass now?

23 A. They go on the American channel at
24 Cape Vincent.

25 Q. What was the reason for that change?

26 A. The pilot station that had been in
27 Kingston for many years was moved under American juris-
28 diction and the pilots were instructed by the American
29 pilotage that they are not allowed to use this channel
30 through Kingston, unless the ship is bound for Kingston

1 or leaving Kingston.

2 Q. Are you aware of the fact that the
3 pilots have been instructed by the Department of Transport
4 not to use that channel unless the ship goes specifically
5 to Kingston?

6 A I have been told that by the pilots.
7 I know it is official, because some came up that way and
8 apparently they threatened to turn them all away back
9 around the island.

10 Q. But you do not have personal knowledge
11 of that, do you?

12 A. I think it is obvious something has
13 happened.

14 Q. Has this been prejudicial to Kingston
15 Harbour in anyway?

16 A. Do you mean the movement of the
17 pilotage to Cape Vincent, or not having the ships
18 coming through?

19 Q. Or the instructions to the effect that
20 the pilots should not guide ships through that channel
21 unless a ship had to stop in Kingston?

22 A. Naturally, the pilot boat operator,
23 Mr. Duggan, who has been in business for 20 years, he
24 has lost all his business, which is quite sizeable.

25 Q. I am referring to Kingston Harbour
26 itself. I understand that a man like Mr. Duggan, I
27 suppose, and other people might have lost business.
28 But as far as your own jurisdiction is concerned, that
29 is the operation and the activities of Kingston Harbour,
30 have they suffered in any way from that change? Have you



1 got less ships stopping by Kingston now or is it a more
2 or less expected increase in traffic?

3 A. I think it has put us off the map.
4 A lot of people, naturally, when ships came through,
5 foreign vessels, they would see Kingston and see our
6 latest activity going on and they would tell their owners
7 and the first thing you know they would bring business to
8 the town. Now, they do not even know we exist. A member
9 of Parliament for Kingston, Mr. Benson, brought this up
10 in the House about this transfer.

11 Q. Have you made, yourself, representations
12 in respect to public authorities?

13 A. No. I am on the Chamber of Commerce
14 Harbour Committee and I am on the Waterfront Committee,
15 which has to do with the yachtsmen and helping visiting
16 people to the port. There is a board of four or five
17 members. To be honest, I have rather kept out of it,
18 because it is rather awkward because it is connected
19 with the Department of Transport and although I am ---
20 I do not know whether I should explain this, but I am
21 not paid by the Department of Transport any salary
22 whatsoever. I am employed as an agent of the Crown.
23 If I do not collect any money, if I do not make any
24 business in the harbour, I never make anything. I am
25 strictly on a commission basis. The harbourmaster
26 just makes the fee allowed and then I am a wharf
27 engineer for three Government docks and that encourages
28 the harbourmaster of the port, on this basis, to get
29 traffic. I go down to Montreal and I go to Toronto,
30 and if I hear of any movement of cargo, or possible



1 movement, I get in touch with the agent and the owners
2 and try to promote the harbour, because then I make more
3 myself.

4 Q. You are not on a salary basis?

5 A. No. I have no salary whatsoever.

6 Q. Do you think of this as an adequate
7 system? Do you think it stimulates your own incentive?

8 A. I think so. I am wound up in the thing
9 and I am really keen on it. I am also very lucky that I
10 have a very profitable hobby. I make historical models
11 for museums.

12 Q. When a ship wants a pilot in Kingston
13 Harbour, do you order the pilot yourself or does the
14 ship get in contact with the pilotage station?

15 A. If the ship is alongside on of our
16 docks --- the Richardson dock which is near the elevator --
17 there is no telephone and you are not permitted to use
18 a radio-telephone when you are laying alongside. You
19 are not allowed to. But the local radio station know
20 the situation. So they do let us call through the
21 B.X. and they call in turn the pilot station. Now, you
22 say you don't know ---- but this is the most extraordinary
23 situation, because we have the public harbour limits
24 and we have the district, the St. Lawrence pilotage,
25 and the harbour limits are within this large district
26 pilotage area. Every time we want a pilot or we may
27 have a foreign ship owner pilot, we have to call the
28 United States and get an American pilot to move a ship,
29 for which they charge \$50.00, plus expenses.

30 Q. And who orders the pilot? Does the

1 ship do it directly, or does it all the time go through
2 you?

3 A If I am on the deck, the captain will
4 say, "Would you mind getting us a pilot?", and I just
5 charge the owners for --- it is only ten or fifteen cents
6 to the States.

7 Q. So you will do it as a matter of service
8 once in a while?

9 A. Yes.

10 Q. But it is not part of your duty, or is
11 it?

12 A. I am actually there to help the owners
13 in every form and I act as agent for them.

14 Q. Are there any particular qualifications
15 required in order to qualify as a harbourmaster?

16 A. The only thing is that you must not be
17 a pilot. To be a harbourmaster, you must not be a pilot
18 or a registered pilot.

19 MR. LALONDE: Thank you, my lord.

20 COMMISSIONER SMITH: I would like to ask this
21 witness a question or two in regard to his last answers.
22 I am not sure that I understood the evidence you gave
23 about this question of the dispatching of the American
24 pilots from Cape Vincent, is it?

25 THE WITNESS: Yes.

26 DOMMISSIONER SMITH: To carry out operations
27 in Kingston Harbour? Is that the fact?

28 THE WITNESS: That is correct.

29 COMMISSIONER SMITH: I want to ask you this:
30 Are there any reciprocal benefits to Canadian pilots



1 carrying on operations somewhere in the American waters?

2 THE WITNESS: Yes. I imagine, coming up the
3 river --- for instance, at Waddington, down below there,
4 I know the haul boats come into there and they do not
5 carry pilots. The sailing masters who are above Kingston --
6 the Canal Pilots, I believe they are called now, they go
7 into American harbours, like Rochester and they are on a
8 daily basis. The harbour is under the control of the
9 American pilots now.

10 COMMISSIONER SMITH: And the benefits would not equalize
11 themselves as between the Canadian and the American
12 pilots? In other words the Canadian pilots are the
13 losers?

14 THE WITNESS: Yes.

15 COMMISSIONER SMITH: In this particular
16 operation?

17 THE WITNESS: Yes. And unfortunately --
18 and our industrial commissioner presented a brief --- it
19 has made it very expensive for us when we want to move
20 a ship within the harbour limits. We have to pay all
21 his expenses from Cape Vincent. Also we have, on
22 occasion, pilots who have come to Kingston and found
23 they are late and their excuse was that they have never
24 been there before and that was the reason they were
25 late. They didn't know where to go to .

26 COMMISSIONER SMITH: Thank you very much.

27 THE WITNESS: I have a drawing here. This
28 vast area, all on one chart if you need it.

29 MR. JACQUES: I should like to file, as an
30 exhibit, the American chart which the witness has kindly

1 prepared for the Commission, unless there is an objection
2 to the filing of an American chart. It is American chart
3 number LS41, Lake Ontario.

4 THE SECRETARY: That will be Exhibit No. 478.

5

6 --EXHIBIT NO. 478: American Chart No. LS41.

7

8 THE WITNESS: The only reason I brought
9 this chart was because if we were trying to see this
10 area of the district of pilotage, it would be necessary
11 to have three or four different charts and it would
12 be hard to visualize that, where you can see it all on
13 this one.

14 THE CHAIRMAN: Can we have a look at the
15 chart before we go any further.

16 THE WITNESS: Yes. That is a straight line
17 from the Carruthers Line to Cape Vincent. That shows
18 the end of the St. Lawrence District pilotage area.

19

20 CROSS-EXAMINATION BY MR. LANGLOIS:

21

22 Q. Do you have any sea experience?

23 A. Yes, quite a lot, in the engine room.

24 Q. In your experience aboard ships and also
25 as harbourmaster at Kingston, have you ever experienced
26 a language difficulty in dealings with masters and
27 officers of foreign ships?

28 A. Yes.

29 Q. Would you give us one typical example
30 of such difficulties that you have experienced?



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Walker, cr.ex.
(Langlois)

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1 A. This was nothing to do with any
2 trouble, but just to show you, there were two Schulti
3 boats in last year to our port, the Angelica Schulti
4 and the Rica Schulti. They both arrived together and
5 they were both under the charter of Canadian Pacific
6 Steamships. I was trying to explain to the captain
7 that the sister ship was coming in.

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1 I didn't realize that these two ships, although they
2 were both Schulties, were both owned by two brothers,
3 and the captains are not allowed to talk to each other
4 and they couldn't understand us both being C.P.R. and
5 both being Schulti boats, and the crew were looking over
6 the side and booing. So this was a case where, had I
7 known, I would have got some men on the shore. They
8 never talk to each other.

9 Q. Is that a frequent occurrence, that
10 you will have difficulties in making yourself under-
11 stood to the master of a foreign vessel?

12 A. You have got to be awfully careful
13 what you say, because you think they understand you
14 and they will talk to you in English, and yet they don't
15 really appreciate what they are saying. In detail you
16 have to be careful what you say, because they can
17 misconstrue this thing. Also, of course, if it is
18 what they want to do, they will understand. Or if it
19 is any instructions or restrictions of dumping of foreign
20 garbage into the harbour, the Department of Health have
21 different cards written in foreign languages which say
22 you must not dump. But in this particular case they
23 were just going to dump this garbage, so they didn't
24 understand. Later on, if there is something much more
25 interesting, they will understand.

26 Q. Would you be prepared to say from your
27 experience that this is a serious situation on board
28 some ships where the pilots speak only English or French
29 and are passing orders to the master or to the crew?
30 Would you say that this is a very serious situation in



1 some ships?

2 A. Yes, it is.

3 Q. You say it is?

4 A. Yes. There was a ship last year, the
5 Mulberry Hill, and she had a Chinese, Hong Kong, crew and
6 her rudder was turned hard over and the Chinese were
7 standing there screaming. Later on they smashed the ship
8 up, and this was language trouble. It was just purely
9 because the Chinese got panicky.

10 Q. In your sea experience have you been
11 on ships where different languages were spoken on
12 board?

13 A. I would say on liners and other
14 ships, the Normandy and the Bremen, and I have made a
15 few trips across the Atlantic. But I have never sailed
16 as a sailor, except in the Navy. During the war quite
17 a lot of Norwegians joined in the early part of the
18 war who were fishing up in the north coast.

19 Q. Is it your experience that masters
20 calling at various ports will have part of the crew
21 speaking one language and part of the crew speaking
22 another language and there is difficulty in communication?

23 A. Yes. We have one right now in
24 Kingston Harbour, the Prince Alexandria. They have
25 Portuguese, Spanish, Dutch, and they can't talk to
26 each other. We had an accident the other day. I found
27 this out. Chinese crews, if you have north and south
28 Chinese, they are not allowed to go on shore in Canada,
29 and one of the men became very ill and we took him to
30 the Kingston General Hospital, and they luckily had a



1 Chinese doctor there. So I had an idea they were not
2 speaking the same language, although they were all
3 Chinamen. I had three Chinamen, and the Chinese doctor
4 said: "Don't leave us. There are four Chinese here and
5 none of us can understand each other."

6 Q. Have you ever been on board a ship where
7 the master would have to use either blocks or a blackboard
8 in order to make himself understood to the man at the
9 wheel, in order to tell him which course to steer? Have
10 you ever had that?

11 A. No. In Kingston we have lime ships
12 and all their officers are very fluent in English. The
13 little tramp ones are dying out, and you get the liner
14 types. I have never seen that happen with blocks.

15 Q. If I understood your testimony correctly,
16 this language barrier could be a very serious situation
17 aboard a ship?

18 A. Yes.

19 Q. Especially a ship negotiating or sailing
20 into very confined waters?

21 A. Yes.

22 MR. LANGLOIS: Thank you.

23

24 CROSS-EXAMINATION BY MR. MASON:

25

26 Q. During the period, Mr. Walker, that is
27 covered in your accident report, how many vessels, in round
28 figures, have come into your harbour?

29 A. You mean a year, or ---

30 Q. Well, for the period or for a year, as an



1 average.

2
3 A. You mean actually into the port to use
4 the port facilities, not passing through?

5 Q. No, that is right.

6 A. Of course, they don't pass through now.
7 300 or 400 up and down, and last year we had 159 Canadian
8 vessels in the harbour.

9 Q. By far the greater proportion of vessels
10 coming into your harbour in any one year are inland vessels,
11 are they?

12 A. Yes, tankers, grain from the elevator,
13 and we had these big lakers.

14 Q. So that accident report involving vessels
15 since 1959, with the exception of one, is a fairly good
16 accident report?

17 A. Yes.

18
19 CROSS-EXAMINATION BY MR. BRISSET:

20
21 Q. Sir, coming back to the language diffi-
22 culties, I am sure you would prefer that ships with
23 foreign crews do not come into your harbour. You are
24 not suggesting all foreign ships should be crewed with
25 English-speaking citizens?

26 A. No, not at all.

27 Q. You have the same problem, I am sure,
28 that they meet in other countries in the world; say in
29 Germany British ships will go there and their crews will
30



1 not speak German.

2 A Yes.

3 Q. That is a problem all over the world?

4 A. Yes. I hope you understand me. I
5 speak so rapidly. When I first went to New York they
6 didn't know I was speaking English.

7 Q. So you have this problem?

8 A. Yes, I know.

9 Q. Coming back to the first casualty you
10 mentioned which involved a German tanker, am I right in
11 having understood you to say that the pilot was on the
12 bridge, but he did not advise the master, because he was
13 out of his district and would have had to be paid extra
14 to render this service?

15 A. Yes.

16 Q. He was not paid extra apparently in
17 that case?

18 A. No, he was not. He didn't realize
19 that and everybody was standing there. It was one of
20 those things.

21 Q. You also mentioned two casualties
22 involving the coal dock in Kingston?

23 A. Yes.

24 Q. And I understand this coal dock is
25 a wooden dock, quite old and quite rickety.

26 A. Not according to the owners, but it is
27 old. It has made a lot of money on accidents.

28 I won't force you to commit yourself,
29 but do you think I was right in declining liability for
30 those two claims, because the wharf was too old and

1 couldn't withstand the ship coming **alongside**.

2 A. Do you mean to say you were the lawyer
3 for those two cases? I met Mr. Desjardin down there the
4 other day.

5 Q. Yes, from my office.

6
7 CROSS-EXAMINATION BY MR. LALONDE:

8
9 Q. Once again, the version you gave of what
10 occurred on that first accident, the German ship, you
11 are just giving what you heard from the ship agent in
12 Montreal?

13 A. Yes. I talked to the pilot afterwards
14 and he was all upset about it. It was a silly thing.

15 Q. Was it because he wasn't paid because
16 he was outside the district?

17 A. When he got outside the district he
18 thought the captain was doing it and the captain thought
19 he was doing it, and it was just one of those things.

20 MR. LALONDE: Thank you.

21 THE CHAIRMAN: Any further questions of the
22 witness?

23 MR. JACQUES: Thank you very much.

24 THE CHAIRMAN: We will adjourn **now** until two-
25 thirty.

26
27 ---Whereupon the hearing adjourned at one p.m. until two-
28 thirty p.m.

29
30 -----

1 MR. LALONDE: My lord, may I produce to the
2 Commission, Mr. Brahm Campbell from our office. I have to
3 be away this afternoon.

4 MR. JACQUES: My lord, I have been supplied
5 with the French text of the Kingston Pilotage Bylaws,
6 which will be filed as Exhibit No. ---

7 THE SECRETARY: 432F.

8
9 ---EXHIBIT NO. 432F: French language text of
10 Kingston Pilotage District
11 General Bylaw (Exhibit No.
12 432).

13 MR. JACQUES: Further to a question which your
14 lordship asked concerning the western limits of the
15 special Decca charts on the St. Lawrence River, the
16 limits are off the Saguenay entrance, and to be precise,
17 at the western tip of White Island. This information
18 was obtained through the Nautical Advisor to the Commission,
19 my lord.

20 May I recall Mr. Burnside, please?

21
22 MR. BURNSIDE, recalled and sworn:

23
24 BY MR LALONDE:

25
26 Q. Mr. Burnside, you have been asked to
27 prepare a summary of the delays for whatever causes in
28 the operation of the St. Lawrence Seaway. Was there not
29 a particularly long delay last year, I think, due to some
30 difficulties in the Eisenhower lock on the American side,

1 or is it the Snell Lock, I don't remember?

2 A. It was the Snell, as I recall. I know
 3 we visited the site on several occasions, and I am quite
 4 sure it was the Snell. That delay doesn't appear in our
 5 records. It would be the record of the Development
 6 Corporation. The records that we are preparing are
 7 under preparation now in our offices at Cornwall.

8 Q. In what evidence you are going to
 9 bring there will be nothing concerning whatever delays
 10 which might have been caused by events occurring in
 11 the American section of the Seaway. Is that the
 12 case?

13 A. That would be correct. Maybe reference
 14 to it. I am not positive, but they would not be included
 15 as delays in our section.

16 Q. Do you remember for approximately what
 17 time the opening of the Seaway was delayed due to this
 18 difficulty at the Snell Lock last year?

19 A. As I recall it, it was of the order of
 20 five days. I don't recall precisely.

21 Q. Are you responsible for the operation
 22 of the listing bridges crossing the Seaway?

23 A. Yes.

24 Q. Do you have a system of radio-telephones
 25 on these bridges so they can communicate with the ships?

26 A. No, we don't.

27 Q. Do you think it would be dangerous, or
 28 possible, to have such radio-telephones on the bridges?

29 A. It would be possible to do so, but in our
 30 opinion, based on experience, it would not be desirable,



1 and for this reason, that when an emergency arises the
2 bridgemaster is busily engaged in attempting to rectify
3 the difficulty. As long as there is no known difficulty
4 at the bridge structure, the approaching ship may proceed
5 with confidence that there is nothing actually wrong,
6 because if anything is discovered faulty in the structure,
7 or anything of that nature, he is immediately notified by
8 the dispatcher through radio-telephone, and our bridges
9 on the Beauharnois are equipped with emergency alarm
10 systems, which consist of a button on the deck of the
11 bridge at the operator's elbow, which he presses
12 immediately there is trouble, it rings an alarm, and
13 a flashing light comes on, and in that case the dispatcher
14 automatically calls the vessels in the immediate vicinity
15 and notifies them.

16 At that time he doesn't know what it is, and
17 probably the bridgemaster doesn't either, but he knows
18 there is something wrong, and by radio the ships are
19 immediately told. Now, the critical part of it is that
20 when the ship comes to the whistle point where he makes
21 his salute to the bridge to signify that he is there,
22 which as a matter of fact is not very frequently used,
23 because conversely the bridge operator recognizes the
24 approach of the vessel, and he sees him, and that he
25 is at that place, by flashing the red light, and the
26 red light is a signal to the shipmaster that he is
27 known and recognized, and that the structure is ready
28 for him at that time, or at least is being made ready.

29 Then the operator goes into his sequence of
30



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Burnside
(Lalonde)

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1 events, which consists of blocking the cross traffic,
2 getting the gates down, getting the bridge unlocked,
3 and raising it. Now, anywhere in this series it is
4 possible to have something occur that would prevent
5 further motion of it, but there is no way of telling
6 this beforehand. Now, the structure would have been
7 operated probably within the hour for some other vessel,
8 and it would have gone through the lifting procedure, so
9 it is something of an emergent nature that has occurred.

10 Occasionally **lightning** may have struck the
11 line, and taken it out at a remote station, and **the effects**
12 reach the bridge after the vessel has started its
13 approach. If that happens, and the bridge doesn't
14 function properly, the operator turns the flashing
15 light to steady red, ignites a flare, and exposes it on
16 the outside of his structure, which is done in a matter
17 of seconds. Included in this procedure is the button
18 to the dispatcher, who in turn radios the ship and the
19 very close-in ships not only get the radio message, but
20 they get the flashing red and the solid light. So at
21 this time the operator of the bridge is too busy engaged
22 with other things to use a radio, because he would have
23 to find out what the trouble is. Maybe it is a fuse gone,
24 or something faulty in his own operation, and it would
25 only impede it to have him trying to communicate with
26 the vessel by radio to explain to the vessel what the
27 trouble is. It don't matter to the vessel at that
28 time. It is a matter of minutes to try and get it up
29 out of the way, so that he does not actually have to stop,
30 so that he is under the necessity of stopping the ship



1 between the whistle sign and the limit of approach sign,
2 which is somewhat closer to the structure.

3 Q. Do you know what is the calling point
4 at Beauharnois for ships in order for them to be given
5 their orders of precedence in the lock at Beauharnois?

6 A. The downbound one --

7 Q. I am referring to upbound. That is
8 number five, isn't it, at page 21 of the St. Lawrence
9 Seaway Masters' Handbook. I read number five: "Entrance
10 to Beauharnois Canal ---- buoy number 24F --- Lake St.
11 Francis ---- order of passing through established here".
12 Are you aware of the fact that it would seem very odd
13 that even it would seem to be a regular practice that
14 the order of precedence is established rather at number
15 six?

16 A. I don't see the advantage of that
17 change that you have in mind. It would be further. That
18 would be after, or before he reached the St. Zotique
19 anchorage in the downbound direction, and the ships
20 would normally go to anchorage, if they had to go at
21 all, in the St. Zotique, and having proceeded out of
22 the anchorage, they would take their order of turn, and
23 it would not seem advantageous to us to have that done.

24 Q. Do you mean calling at number six,
25 instead of number five?

26 A. Yes.

27 Q. My question was are you aware of the
28 fact that it is done in practice?

29 A. No, there is occasionally things done
30 that should not be done. The reason that probably five



1 was chosen, or one of the reasons, was that more speedy
2 ships can pass. in Lake St. Francis, and gain some
3 time for themselves in opposition to a slow ship, which
4 would not be possible if you made the turn at number six.

2
5 Now, what is done occasionally is that when
6 they are going to anchor probably a great deal of times,
7 when it is necessary to send them to anchor he would be
8 advised to go to the St. Zotique anchorage, and you
9 would follow a certain vessel which is preceding you,
10 so the master would be watching that ship, and when he
11 began to make his preparations to leave, he would know
12 that his turn was coming, and it would make for a little
13 more orderly advance.

14 Q. Would it not be the case that if in
15 practice this order was established at number six, there
16 would **effects**, delays for faster ships, who would be
17 forced to wait their turn between number five and
18 number six?

19 A. I would see no reason why the
20 instructions as laid down should not be followed.

21 Q. Have you any personal knowledge about
22 the operation of other canals in Europe? I am referring
23 particularly to linesmen and wheelsmen?

24 A. Not personally, no. I have been
25 advised of certain ones. I am familiar with the Panama
26 Canal to a certain extent, which of course is not in
27 Europe.

28 Q. And you don't have any, or do you
29 know whether at the Panama Canal they have their own
30 linesmen all the way on the approach walls?



1 A. They don't have approach walls in the
2 sense that we do. They approach the locks, and men leave
3 the locks by small boat and take the lines to the ship,
4 and the ship is cradled between lines from each side of
5 the entrance structure, so that she comes in under
6 control from both sides of the lock, as well as her own
7 wheel control, and she is controlled by winches ashore
8 on the mules as they call it, which are really mobile
9 winches of considerable strength.

10 Q. You don't have any personal knowledge
11 of the practice elsewhere?

12 A. No, other than what I have read.
13 I believe it is the general practice, but not personally.

14 MR. JACQUES: What is a whistle post?

15 THE WITNESS: A whistle post would be a
16 whistle sign, actually as we call them, is where the
17 vessel whistles to the bridge structure to indicate
18 that it is approaching. Now, there might be occasions
19 where the man in charge of the bridge might be looking
20 at the wrong direction, or perhaps in somewhat hazy
21 conditions, or against a bright sun, or something,
22 that he couldn't actually see the vessel.

23 It
24 is a signal to the bridge that the vessel is there.
25 It is very seldom used because the vessel is recognized
26 by this flashing light. When the flashing light is
27 on, then the master knows the bridge is alert and
28 recognizes his approach. There is a disinclination to
29 use the whistle more than necessary in built-up areas,
30 because it does operate 24 hours a day, and people living



1 in close proximity to the canals in the built-up areas
2 may find their sleep disturbed somewhat, and it is not
3 done in any case more than necessary. We would prefer
4 our men to see the ship themselves, rather than have
5 it drawn to their attention.

6 MR. JACQUES: So, if the master didn't see the
7 flashing red light, then he would whistle?

8 THE WITNESS: That is correct.

9
10 CROSS EXAMINATION BY MR. LANGLOIS:

11
12 Q. Mr. Burnside, coming back to this
13 question of radio-telephone stations along the Seaway, I
14 understand that some of these stations are manned by
15 personnel speaking only the English language.

16 In this respect, has it been brought to your
17 attention that for the last two years, the St. Lawrence
18 Shipowners Association has sent, either directly to the
19 Seaway Authority, or to the Minister's office in Ottawa,
20 the Minister of Transport, resolutions asking that these
21 stations should be manned by bilingual personnel?

22 A. Not to my knowledge.

23 Q. Are you aware of the fact also that
24 there are a certain number of coastal vessels sailing
25 from ports of the St. Lawrence River going up the Seaway,
26 entirely manned by French-Canadian crews?

27 A. Yes, we have a trade of that description,
28 of course.

29 Q. Are you also aware of the fact that
30 masters of ocean vessels of French registry are requesting



1 that the pilots that board a vessel here at St. Lambert
2 be bilingual, due to the fact that these masters don't
3 understand the English language?

4 A. That has not come to my attention as
5 such.

6 Q. Now, you stated the day before yesterday
7 I believe, that some masters have complained that they were
8 unable to stand up all night going through the Seaway.

9 Did you receive this complaint from masters
10 of inland vessels, lakere?

11 A. Oh, no, no. I was referring specifically
12 to the ocean ships in connection with the fact that
13 they tend to be somewhat understaffed for the voyage
14 in Canada.

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R/FE/RPS

English

1 Q. Does your remark in this respect apply,
2 your statement in this respect, apply only to ocean-
3 going vessels?

4 A. Yes. We haven't had that complaint from
5 the inland ships because they are accustomed, for many
6 years, to travel 24 hours without any difference what-
7 ever in the tide.

8 Q. I just wanted to make this clear.

9 A. That is correct.

10 Q. Now, do you recall a request which was
11 made some years back by pilots, asking for piles to be
12 driven down on the south side of the entrance of the
13 St. Lambert lock here in order to prevent vessels leaving
14 the lay-by wall with the wind blowing on the starboard
15 side, being driven against the south bank?

16 A. No. I recall many conversations and
17 discussions of methods of improving that entrance because
18 it is pretty nearly straight north and south and the
19 prevailing winds are toward the west and it is a difficult
20 entry; and in that connection the recommendations included
21 fendering on the walls, some improvement in the position
22 of mooring posts, that they be set further back from the
23 face of the walls so that the angle of incidence of the
24 leading line would be flatter and give the high-sided
25 ocean ships a better chance to hang onto the wall once they
26 had touched. But I do not recall their requests for
27 fenders along the south side. We would much prefer -- while
28 the subject is raised -- that if the ship could not make
29 that wall, that she doesn't come in and that is what we,
30 or I, referred to before in saying that the assistance of



English 1 the pilots would be welcomed in that regard -- that if
2 the wind was of sufficient force and direction to make it
3 difficult for a specific ocean ship, or any other ship,
4 to make the wall, that he make his judgment known to
5 us so that we can realize that this was a special or a
6 difficult ship, because we do not see them. The pilots
7 do. Our people do not see the ships, as far as the
8 individual trip is concerned, until they are in sight
9 of the lock itself, so that this assistance would be
10 welcomed. If it could be made workable, we would be glad
11 to have it.

12 Q. But, could there not be instances where
13 you have a moderate wind but as the ship leaves the lay-by
14 wall to enter the lock, that you have a strong and unexpect-
15 ed gust of wind?

16 A. That is possible, but it is not normal.
17 It is not as frequent as a ship coming in without any
18 ballast and carrying little cargo, if any, and lying so
19 high in the water that it is dangerous to itself and to
20 the others.

21 Q. But would you agree that the clusters of
22 piles, sheet piling with the floating fenders can improve
23 the entrance to the St. Lambert lock, I mean on the south
24 side? On the east side, I should say?

25 A. I am not too sure how effective that would
26 be. There is quite a widening there in that it is possible
27 for a ship to leave the immediate channel and take up a
28 position that might be where the twin locks will be in
29 future when they are constructed. That is the entrance to
30 the twin. I do not know that a series of piling there would



English 1 be too successful. There is a comparative situation,
2 just above the guard gate on the Welland, where there is
3 a series of steel pile clusters that were placed in the
4 east embankment at that point. There are quite a number
5 of them and they were designed for just that purpose,
6 so that the ship might come against them, if necessary,
7 and be guided into the opening of the guard gate; but they
8 were never used and the sailors objected to them, partly
9 on account of the difficulties of landing. They point
10 out in their statement that they should be decked or a
11 very extensive landing platform made because, in their
12 opinion, they were more dangerous to them than if they
13 were not there, in that they wouldn't use them. They
14 seldom use them at all and one of these times I think
15 they will be removed, when money and other things are
16 proper for it.

17 Q. Is it not a fact that with the present
18 condition at the entrance of the St. Lambert lock, that
19 even with a moderate wind, westerly, or southwesterly
20 wind and northwesterly, that the pilot would have to
21 keep enough steerageway on his vessel in order to make
22 the lock?

23 A. That is true. It tends to be a difficult
24 entrance.

25 Q. Is it not also a fact that since the
26 pilot, the Seaway pilot boards the lay-by walls, sometimes
27 he takes the ship into the locks, without knowing the
28 condition beforehand of that ship and he will be getting
29 on the ship for the first time, not knowing about her
30 manoeuvrability, that it would be pretty difficult for



English

1 him to pre-judge the situation?

2 A. I know of no body of men who would be
3 in a better position to judge the great variety of ships
4 which you meet, because you are doing it every day and
5 I would bow to you, sir, that you do not know as much
6 about the ship as the individual captain does. But, as
7 a class, I know you should and I am confident that you
8 do have a judgment as to the characteristics of a ship
9 and have the ability to judge it quickly.

10 Q. But would you agree with me that it could
11 be difficult for a man, inexperienced in handling the
12 ship, just looking at the ship and judging for manoeuvr-
13 ability and how it would behave with the wind in the
14 port bows or the starboard quarter, and so on?

15 A. This is, I think, in support of our
16 contention of our desires to have the pilot that brings
17 that ship into the lock be the same pilot that is going
18 to canal it and take it up the system, because to have
19 a harbour pilot bring it across the harbour and then tie
20 up to the lock, we will say, an entrance wall, and get
21 off the ship and leave it, his responsibility is ended,
22 he by human nature will not take, perhaps, as much
23 interest as would the man who will have to con that
24 ship up through the system, who knows that he is not only
25 going to make that first entrance but going to continue
26 with it, and this idea of holding a questionable ship back
27 for a matter of hours until the conditions are such that
28 the particular ship could enter would be of great advantage
29 to many others who are low in the water, heavily laden,
30 and could quite readily make the motion, rather than having



English

1 him come in and finding that he is in difficulties, even
2 if he continues his progress or it is so bad that he has
3 to get tugs to take him off, but delays himself and every-
4 body else. But I think what you are saying is, in support
5 of our argument that there should not be -- I wouldn't
6 say that there should not be a change of pilots, but that
7 the pilot that is going to take the ship up should be aboard
8 that ship for the entrance across the harbour so that he
9 can use his good judgment and say "This ship is too
10 dangerous", if that is his judgment.

11 Q. I understand this is a suggestion that you
12 have made to the pilots, to the Shipping Federation?

13 A. No. We have, from time to time, discussed
14 this problem. The matter of the pilot's spheres of
15 influence, perhaps, is under specific consideration at
16 this identical spot where we are now and probably this
17 is an effective way where presumably in talking to rep-
18 resentatives of the various groups of pilots and the ship-
19 owners and all the others, as well as the Commission, it
20 might be an effective place to say what we have in mind.

21 Q. You are suggesting that the Seaway
22 pilot boards the ship in the harbour and goes across the
23 harbour to St. Lambert with the harbour pilot?

24 A. I am sorry.

25 Q. That he would have to go across the harbour
26 with the harbour pilot?

27 A. Yes. I wouldn't presume to say that the
28 harbour pilot should be dispensed with. That is something
29 else again. There would be added costs. But from where
30 we stand, in watching the system, it would be a desirable



1 situation.

2 Q. Now, what about lake ships coming up
3 the Seaway, that stop in Montreal, should a river pilot
4 stay on board until she gets into the lock, if the lock
5 is not open when she gets there? Would you make the
6 same suggestion?

7 A. I do not know, of my own knowledge,
8 whether the river pilot that brings the ship up, pilots
9 the ship through the harbour or whether he is joined
10 by a harbour pilot. I had understood that he was.

11 Q. I am instructed, sir, that the river
12 pilot, if the lock is open as he gets to St. Lambert,
13 he takes the ship in?

14 A. That is correct.

15 Q. If the lock is not open, he takes it to
16 the lay-by wall where the Seaway pilot boards her?

17 A. That is a distinction that applies
18 equally to the harbour pilot. The incoming pilot, be he
19 river or harbour, takes the ship directly into the lock,
20 if the lock is ready for him. It saves one landing.
21 But that is not the point that I am attempting to make
22 It is because he has already brought that ship all up
23 through the St. Lawrence --- and I think that you will
24 probably agree that the incidence of the number of times
25 that a ship is brought directly in without stopping at
26 the harbour are comparatively few, in connection with a
27 ship of the nature of which we are discussing, with the
28 high sides and probably lightly loaded and with an enormous
29 amount of windage.

30 Q. I understand your position and I am



1 inclined to agree with you, but in a case of the river
2 pilot having to go to the lay-by wall, are you prepared
3 to suggest that this river pilot should stay on board and
4 that the Seaway pilot would board the ship and stay on
5 board and take the ship in?

6 A. No. I think that would be quite a
7 different situation. The ship is already in. It is
8 committed. There is nothing the new pilot can do.

9 Q. And she is at the lay-by wall?

10 A. And she is at the lay-by wall. What I
11 am trying to say is that if she is not able to manoeuvre,
12 she should not come in at that time. She should lay back.
13 It seems a reasonable suggestion, from where we are.

14 Q. And the same reason would apply for a
15 ship coming from the harbour. If she goes to the lay-by
16 wall and the harbour pilot is not staying on board,
17 she should stay there and not come in if the wind is too
18 high and she has very little manoeuvrability?

19 A. We are most anxious to have the large
20 size ships avoid entry during adverse conditions.

21 MR. LANGLOIS: Very well. Thank you.

22
23 CROSS-EXAMINATION BY MR. MASON:

24
25 Q. Mr. Burnside, you mentioned that ships
26 were inspected before they enter the Seaway and I am
27 wondering where the ships are inspected and exactly by whom?

28 A. They are normally inspected at the
29 Long Point anchorage during the time that they are having
30 their customs and health inspection and the other requirements



1 for ocean ships particularly; but these are new ships with
2 which we are not familiar and we haven't seen them before
3 and their mooring equipment is inspected by personnel of
4 the Seaway. Now, we have two master mariners that alternate
5 this duty and every ship is inspected. The incidence of
6 new arrivals is decreasing somewhat, but there are still
7 a considerable number of ships coming in for the first
8 time and it has the double purpose of having a word with
9 the captain, as well as having a look at his Seaway equip-
10 ment which practically all consists of some proper method
11 of coming to the wall without tug assistance, or when he
12 does reach the wall, getting his men ashore and getting
13 the lines out and handling the lines in the lock where,
14 perhaps, in their normal moorings they are not used to
15 the ship rising 47 feet, as it does in the Welland, or
16 sinking that much so that it has to be controlled while
17 it is taking this vertical movement.

18 Q Some effort is made then by the Seaway
19 inspectors to insure that the crews of these vessels are
20 familiar with canaling procedures such as landing men
21 ashore or getting constant attention on the line?

22 A. I think we still have a considerable
23 way to go with this item that you are mentioning now.
24 Up to the present time, our facilities have been extended
25 and we have leaned rather heavily on the Department of
26 Transport for assistance in their Steamship Inspection
27 Branch and they have very freely helped us out in
28 difficult conditions, because we did not have the compe-
29 tent staff to do it; but that phase is passing and I think
30 the time probably is not too far ahead that the numbers



1 of new ships will be decreased, so that we can extend
2 the time that our ocean-going masters with inland
3 experience can perhaps have a word with the master and
4 acquaint him somewhat with the conditions that he is
5 likely to meet. So that I think this is something that
6 we have in mind, but we haven't so far been able to, I
7 think very effectively accomplish.

8 Q. So do you know whether the pilots them-
9 selves assist the Seaway to this end in assuring that
10 the crews are familiar with the canaling procedures?

11 A. I think again it is, while something
12 that we should be doing, there is something that the
13 pilot can well do. They are familiar with the conditions
14 and a word with the master might be most effective,
15 coming from them, as the experienced people in this
16 projected voyage, and I am sure it would be of great
17 advantage in safe voyages. Now, they actually do it
18 when they approach the lock --- that is the pilot ---
19 but a word with the captain, explaining what he is going
20 to have to do and to see that the mooring facilities
21 are in fact not only on the ship but ready to be used
22 is a field of endeavour in that regard.

23 Q. Now, as to this question of the
24 language which you use for the dispatching of ships,
25 with the possible, sometimes, exception of the dispatching
26 station at Beauharnois Canal, what language is used
27 throughout the rest of the Seaway and the Great Lakes
28 system for the dispatching of ships?

29 A. Throughout the Seaway, it is in English.

30 Q. Throughout the Seaway it is in English?



1 A. Yes, with the exception of the
2 Beauharnois, which you referred to in your question.

3 Q What proportion of the users or the
4 ships transiting the Seaway would be in the class of
5 inland vessels?

6 A. It is something of the order of two
7 inland to one ocean --- that general proportion. That
8 is all trips.

9 Q And I would be safe in saying that all
10 these inland vessels are familiar with the dispatching
11 in the English language?

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1 A. To the best of my knowledge and belief,
2 most of them use the English language. I think that is
3 all I can say.

4 Q. Would you know of your own knowledge
5 under what language international aircraft, for instance,
6 are controlled?

7 A. Not to my knowledge. I have read various
8 articles, but not of my own knowledge. I wouldn't be
9 competent to answer that.

10 Q. On the question of linesmen, Mr. Burnside,
11 would it be safe to say that as the ocean vessels
12 gain experience, canalizing experience each year they
13 are having less difficulty on this question of landing
14 a man on shore and taking lines?

15 A. I think we are all improving as we
16 go along, but I do think the ocean ships as a class are
17 improving faster than the others, due to the fact that
18 they have longer to go.

19 Q. Would you say that part of the improve-
20 ment is due to the approach walls, the fenders?

21 A. Yes, I think it is an advantage. We
22 get continuous comments in that regard. They are very
23 much better with the wooden fenders and the rubber
24 booms we have alongside.

25 Q. You indicated that these vessels are
26 not now afraid to come up to the approach walls proper.

27 A. I think they are becoming accustomed
28 to bringing their vessels close to the solid walls without
29 fenders, but with the fenders they are becoming very
30 proficient as time goes on. I know that, from operation.



1 COMMISSIONER SMITH: My lord, I would like
2 to ask the witness a question and give a little preamble
3 in order to base a premise on which I wish to ask the
4 question.

5
6 BY COMMISSIONER SMITH:

7
8 Q. In answer to Mr. Langlois and I think
9 also Mr. Lalonde yesterday, you said that you were not
10 a maritime sea-going expert. But listening to you yester-
11 day, with that informative information which you gave
12 with regard to navigation and mobility of ships, the
13 balance, the ballast, the squats and the dives and the
14 other information you gave, prompts me to put a question
15 to you, and it is wrapped up in a statutory sense with
16 part 6(a) of The Canada Shipping Act, of which you are
17 familiar.

18 Now, there is, as you know, in that part 6(a)
19 a system of compulsory pilotage in the designated waters
20 area of the Great Lakes Basin, and a more modified system
21 of compulsory pilotage, also in the Great Lakes Basin
22 area as well.

23 Now, apart from the question of whether the policy
24 is a popular or unpopular one, I would like to ask
25 you this question: Is it your opinion that the policy now
26 in force in the area over which you have some control is
27 the best type of navigation for the safety of ships in
28 the sense that it is a compulsory pilotage, rather than
29 a compulsory payment of dues or any other lesser type of
30 policy?



1 A. That is a difficult question, sir. The
2 pilotage as such does not come under our pervuew. I
3 would say this: That in my mind there would appear to
4 come a time when a master would have acquired sufficient
5 experience to qualify him as a proficient master of a
6 ship, where he would not require a pilot. Now, I realize
7 that is not a popular conception, but with proper and
8 adequate safeguards there will come, I think, a time when
9 the individual master, with adequate and strict control,
10 might be able to bring in and would be able to bring in
11 his own ship through the system safely. This would
12 have to be very rigidly controlled, because while under
13 the present system the master is responsible, the man
14 actually conning the ocean ship is a pilot and we would
15 have to be very careful that the master actually had
16 sufficient experience and not confine it only to the
17 fact that he had ridden the bridge and watched someone
18 do it for a few years. I think the position as it
19 affects the inland ships in our waters where pilots, as
20 I understand it, are not required, is quite effective
21 in that the masters of the inland ships have themselves
22 spent all their lives, most of them, navigating systems
23 such as the Welland Canal, which is identical as far as
24 structures are concerned for entry or materially
25 identical with those which are new structures. The new
26 structures were built so that they wouldn't be handling
27 the same type of ships that went through in 1932. It
28 works very well and continues to work very well, and the
29 inland ships are not only more easily handled, because
30 of their structure and the windage, but because their



1 masters are more competent people.

2 I do not know if I have answered your question
3 as you had hoped.

4 Q. The compulsory system as it is today, is
5 it working satisfactorily?

6 A. Compulsory with respect to the ocean
7 ships requiring pilots --- I think within the limits of
8 appreciating that any comparatively new system such as
9 the Seaway is, only having had a few years' experience,
10 would probably require some adjustment; and there is a
11 distinct change, as I understand it --- I am not expert
12 at all in the pilotage situation other than in the
13 down river requirement --- there is a change right at
14 the lower end of our Seaway where compulsory pilotage
15 is of a different character, I understand, than it is
16 in our system. I think that we should attempt to
17 avoid undue petitioning of a variance on influence of
18 the pilots so that we may avoid the matter of jurisdictional
19 disputes, not a dispute of a man not being able to take it
20 a mile or two where another ship may pass him. That
21 would be our most severe criticism of the present situation,
22 that it seems somewhat difficult at times to avoid delays
23 of some character. Admittedly, they have been well
24 confined. They do exist, though, and it would be an
25 improvement, I think, to have legislation so worded that
26 a pilot proceeding downbound from our area would continue
27 in his place and in his duty to con the ship until he
28 was, in fact, replaced by his opposite number, or if he
29 was not replaced, that he would take the ship to a safe
30 mooring or safe anchorage as soon as it could be



1 accomplished without travelling great distances. The
2 distance to the harbour might be a few miles in extent
3 and most of it is in confined waters, but a comparatively
4 short trip going into the harbour proper and something
5 of that order. As we see the question, it should work out.

6 Q. Am I following you correctly, do I
7 understand you correctly that instead of the two policies
8 now, one in the Great Lakes basin area, the other in the
9 designated waters area, there be one overall policy in
10 the Great Lakes basin?

11 A. No, I was referring to the point of
12 demarcation which I understand is at Victoria Bridge,
13 between one class of pilot and ----

14 Q. I am sorry, I wasn't following you.

15 A. The matter of the pilotage in the
16 Great Lakes system, I would not be competent to comment
17 on that, sir, other than our canal Seaway system. I
18 would not be competent.

19 COMMISSIONER SMITH: All right. Thank you
20 very much.

21
22 CROSS-EXAMINATION BY MR. BRISSET:

23
24 Q. Mr. Burnside, I believe that your
25 evidence has been most interesting and informative. I
26 am sorry that although the subject seems to have been
27 exhausted, I have some more questions to ask you if you
28 will bear with me.

29 Mr. Burnside, when a ship enters or before a
30 ship enters the system it has to be pre-cleared under the



1 regulations?

2 A. That is correct.

3 Q. And I understand that once a ship has
4 been pre-cleared it will be supplied with all notices
5 issued by the Authority.

6 A. Our issuing system is predicated on
7 the individual persons pre-clearing the ship, so that
8 our notices, Seaway notices, are notices to mariners,
9 but they are called Seaway notices to avoid confusion
10 with the Department of Transport's notices to mariners.
11 They are sent to pre-clearing people, so that the persons
12 proposing to use the system are provided with notice.

13 Q. You have spoken of the pilot. I am
14 speaking here of the Seaway pilot, informing the master
15 about operational procedure in the system. Would you not
16 agree that it is the duty of the pilot to so inform the
17 master when he comes aboard, as anywhere else in the
18 world, of the irregularities of the port and to give
19 him various other information which would be useful?

20 A. It seems a reasonable conclusion from
21 our standpoint. I wouldn't comment on the other systems
22 throughout the world when the pilot comes on board.

23 Q. You have suggested that perhaps there
24 should be some improvement in that regard, and may I
25 suggest to you that possibly there would be an advantage
26 in the Authority having meetings with the pilots, to
27 greet them and include means of improving the traffic in
28 the system?

29 A. We conduct schools in each non-navigation
30 season in the Winter and bring our operating people in for



1 a matter of a few days and review with them the operating
2 procedure, any changes which have come to light, any
3 changes in the equipment, to ensure that they are all
4 doing the same thing at the same time and that they are
5 following the regulations, so that a ship approaching
6 one structure does not have to remember that this struc-
7 ture wants them to do it this way and another one
8 another way. It is not only for uniformity, it is to
9 improve on the operation of the new men, that they are
10 advanced in their stature in the system, and I am sure
11 if it could be arranged we would welcome the opportunity
12 of explaining in greater detail than is otherwise
13 possible to the pilots what we are trying to do, and
14 why we are doing it, because it is very difficult for
15 someone sailing past the structures to know what is
16 going on in the structure itself and why some of these
17 things which may appear somewhat peculiar, perhaps, are
18 somewhat necessary, and we would welcome that, I am
19 sure we would.

20 Q. The pilots, of course, do not come
21 under your jurisdiction, but you would think it advisable
22 if arrangements could be made for the pilots to attend
23 these briefing sessions with your own staff?

24 A. The pilots do not come under our
25 purview. We are in the position, as they are, of
26 working with an officer who is doing part of the whole,
27 and if both persons attempting to accomplish the whole
28 are doing it in the same way, I am sure it would be an
29 improvement. It wouldn't indicate any desire whatever on
30 our part to comment on their navigational abilities or

1 their knowledge, but to review with them the procedures
2 which we have found to be the most advantageous, and
3 to discuss with them, of course, at the same time, which
4 I think would automatically follow, get their views on
5 the system, as we already do with the masters of the
6 various organizations.

7 Q. Mr. Burnside, my questions are addressed
8 to ocean ships, and I would like you to keep that in
9 mind.

10 You are aware, of course, that pilotage is
11 compulsory for ocean ships in the Welland Canal, it is
12 compulsory between Cornwall and Kingston, but between
13 Montreal and Cornwall only payments of dues are
14 compulsory. But would you agree with me that invariably
15 ocean ships do take pilots, Seaway pilots, between
16 Montreal and Cornwall?

17 A. I wouldn't be in the position to
18 comment precisely on that, because we do not check it.
19 To the best of my knowledge, I do not recall having
20 visited a ship or watched it going through without
21 having seen a person on the ship whom I presumed to be
22 a pilot. We do not receive a report that these vessels
23 have a pilot or do not have a pilot, but I take it that
24 they have.

25
26 -----
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1 Q. Would I be right in assuming that your
2 dispatchers at the various stations when they have to communi-
3 cate with ships in the system will assume that this
4 ship, now speaking of an ocean ship, has a pilot on board?

5 A. I think as a matter of fact, that our
6 dispatchers would know as soon the voice replies to their
7 hailing whether it is an ocean captain or whether it
8 is a pilot. I think there is little doubt of that, that
9 they are pretty well familiar with the various pilots,
10 and would know.

11 Q. You explained, Mr. Burnside, the
12 procedure followed to clear a ship into the Seaway at
13 the Montreal end, and explained that this is done
14 through communications between the dispatcher at
15 Beauharnois and the harbourmaster. Am I right in
16 assuming that the dispatcher does not enter into
17 communication directly with the pilotage office
18 dispatching office?

19 A. Not at that time. We do communicate
20 directly with the pilotage office on the downbound trip,
21 so that we may assist in advising the pilotage office
22 of the character of pilot that the downbound ship will
23 require. This is by request of the D.O.T. pilotage,
24 and we have done that. There is a teletype at the
25 present time going forward from Beauharnois giving the
26 name of the ship and the time of departure and the type
27 of pilot required. Then, when they proceed further to
28 Cote Ste. Catherine, there is a telephone conversation,
29 a land line conversation, between our personnel at the
30 lock and the pilotage office, that gives again the time



1 of departure of the vessel, so that that is the system.

2 Now, I was mentioning the other day that there
3 is a proposal afoot that the pilotage dispatch office
4 dispatcher be equipped with a radio telephone system,
5 so that the ship's master or pilot as the case may be
6 can advise him of any change of plans, or perhaps keep
7 him more closely advised as to the time of his expected
8 arrival, which would be an improvement.

9 We are assisting as we go along, but we think
10 that this would be a better procedure, and we would
11 be pleased if it could go forward.

12 Q. You have mentioned yesterday that you
13 would be in accord to recommend that the seaway pilots
14 at Montreal be dispatched from St. Lambert, where there
15 could be housing accommodation and office accommodation
16 arranged for him.

17 Am I right in understanding that this would
18 improve the efficiency of dispatching seaway pilots?

19 A. We feel that it would, in that the
20 pilot would have a place to come, a headquarters to come
21 to and from which to depart, and would tend to improve
22 our part of the system. It would avoid the somewhat
23 uncertain passage across the Montreal bridges, which at
24 certain times become highly congested, and it must be
25 difficult to gauge their time of departure from the north
26 side as to just when they are going to arrive at the south,
27 or through the City of Montreal, and it might tend to
28 having one or two extra pilots a good deal of the time,
29 if not all of the time at the St. Lambert lock.

30 This is one suggestion, the other being that



1 the change of pilot might well take place by boat, as it
2 does in so many other places, where the pilot is actually
3 taken off the ship as it moves forward, having completed
4 that particular part of his passage. For instance, at
5 Port Weller, where the downbound pilot clears lock 1
6 at Port Weller, and as he is proceeding across the harbour
7 and to the exit of Lake Ontario, the pilot leaves the
8 ship, that particular pilot leaves the ship and the
9 relief pilot would go aboard there. Conversely, on the
10 inbound or upbound passage, the pilot boards the ocean
11 ship before it actually enters Port Weller Harbour, not
12 in the lock. This system works better, because the
13 pilot has a chance to become familiar with the ship, and
14 this business of refusing, or declining to bring the
15 ship in under adverse conditions is much more readily
16 accomplished under those conditions, rather than changing
17 them actually at the structure.

18 Q. In other words, if I may summarize
19 this, you are actually seeking closer coordination
20 between your Authority and the Seaway Pilots?

21 A. With the desire of improving these
22 things that aren't connected with the more serious
23 features, or more widely-ranging features of the question,
24 yes.

25 Q. Once ships are in the system, and
26 moving, am I right in understanding that there must be
27 close cooperation between the ship and your dispatching
28 stations, in order to ensure proper control of traffic?

29 A. That is right.

30 Q. And then again the role of the pilot,



1 I would take it, would be quite important to make sure
2 that there is always that coordination between the
3 dispatching office and a ship?

4 A. That is a very important factor indeed.

5 Q. This is important not only for the
6 ship on which a particular pilot is, but also for all
7 other ships that are either moving up or down in the
8 proximity of that very vessel.

9 A. That is correct.

10 Q. Do you consider, Mr. Burnside, that
11 there is much room for improvement in this regard in
12 the present system?

13 A. I do. I think the pilot might be
14 improved from our standpoint by a closer adherence to
15 the Masters' Handbook, and the system outlined in it,
16 not only that they might work as a team, so that the
17 vessel equipped with a pilot, or provided with a pilot,
18 might be going through as nearly as possible the same
19 procedure as an inland ship which may not have a pilot,
20 and so that our own operators ashore would have confidence
21 that every ship would appear at its appointed place
22 as nearly as possible to the correct time, so that the
23 lock itself is kept busy, and yet is not overcrowded.
24 This is our main factor of the capacity of the system
25 is the locking device itself. If it can be used to
26 capacity, the ships enter properly, use an appointed and
27 recognized system, all do the same as nearly as possible,
28 leave it promptly when the proper time comes, and proceed
29 at a steady rate to the next structure, and do the same
30 thing over again, our capacity would be very significantly



1 increased.

2 The matter of the slow vessel is very trouble-
3 some to us. I have from time to time talked about the
4 fast vessels, but the slow vessel is very time-consuming
5 too, in that a master may not be as anxious to arrive
6 at a certain location as other masters may be, that he
7 deliberately may delay the passage of his ship, or he may
8 be over cautious, as a matter of fact, in wishing to
9 stay within the confines of the lock, rather than
10 proceed to the next structure, which might be all right
11 as far as his standpoint, but would block the whole system,
12 and this occasionally occurs. The slow vessel is
13 troublesome to us too, and we are very anxious to maintain
14 a constant speed. We are satisfied that the time of the
15 pilots, as well as the ships themselves, within the system
16 would be decreased significantly if all our customers,
17 shall we say, followed the routine.

18 Q I take it that as regards instructions
19 relating to speed for instance, insofar as they are
20 connected with traffic control, the instructions will be
21 issued by either the lockmaster or the dispatcher to
22 the vessel, and in the case of an ocean vessel to the
23 pilot?

24 A. It is a standard instruction, unless
25 there is some unusual occurrence, in that when the
26 dispatcher is advising a ship to leave an anchorage, or
27 advising him as to the conditions that he will meet when
28 he arrives at a lock, he does that on the assumption that
29 that ship will travel at a certain speed, and arrive there
30 at a certain time, so that the processing of the ships



1 within a given lock may have reached such condition that
2 there is in fact a place for that ship to go when
3 he arrives. Conversely, when there is no ship at a lock
4 to keep it busy, if a lock misses a stroke, so to speak,
5 it is not recovered. That part of the day is gone, and
6 then you will have a slow ship closely followed by a fast
7 ship, and they must both ----

8

9 ---A short recess.

10

11 Q. Mr. Burnside, when ships are in the
12 system there is, am I not right in saying so, a consider-
13 able amount of conversation over the radio-telephone going
14 on between, say, the pilots on board ocean vessels and
15 your dispatchers or lockmasters?

16

A There is quite a considerable amount of
17 necessity to accomplish the purpose for which the phones
18 were intended. They may go somewhat beyond that a
19 little. They are inclined to overstep it somewhat.

20

Q In the case of a French-speaking pilot
21 and a French-speaking dispatcher this conversation will
22 quite often be carried on in French?

23

A. In the Beauharnois area, yes.

24

Q. Although you have made no such recom-
25 mendation, would I be going too far if I were to ask you
26 if you agree that it might better serve the orderly
27 movement of traffic from the point of view of safety,
28 and the point of view of traffic itself, the movement
29 itself, if such conversations were carried on in English?

30

A. I would agree with the recommendation

1 of the Dominion Marine Association and the implied one
 2 of the Shipping Confederation that it would be better.

3 Q. You would be in a position to so
 4 instruct your dispatchers and your lockmasters, as they
 5 are your servants, the servants of the Authority?

6 A. As you will realize, of course, there
 7 are many things involved, and it would probably be
 8 better, certainly from our standpoint, if the matter
 9 were dealt with by some body other than ourselves.
 10 Our regulations don't specifically state the language
 11 which must be used throughout the system. The
 12 matter is not specified in our regulations, other than to
 13 say that the The Canada Shipping Act must be followed.

14 Whether we would be empowered or whether we
 15 would be inclined to issue such an order, we would
 16 certainly hope that it would not be necessary to do so,
 17 and that the people involved, if they are convinced,
 18 as we are, that that was advisable and better to assist
 19 them, that they might do so without a specific
 20 instruction on our part.

21 Q. You would not have any authority over
 22 the pilots at all events in the present system?

23 A. Not the pilots, no. The only thing
 24 where the pilots become amenable, I think, to our
 25 regulations is that they are an agent of the master.
 26 This is quite a wide question, I think, and since they
 27 can be conceived in our opinion an agent of the master,
 28 and are paid by the master's principals, that they in
 29 turn would be amenable to the regulations.
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There has never been any attempt to do any such thing with the pilots.

Q. That is why, I take it, Mr. Burnside, if there is a breach of regulations by a ship, let us say that the ship has exceeded the speed limit, or has gone too slow, or too fast, contrary to instructions, received you take measures against the ship. You will fine the ship, and even though the pilot might be at least in theory to blame for the breach, you will not take any disciplinary measure against the pilot?

A. That is right, the measures would be against the owners and the captains.

Q. You have no authority, I take it, to take disciplinary measures against the pilots?

A. We have no authority to take disciplinary measures against any individuals other than the ship, except it were shown --- I am speaking of a different context perhaps --- if a pilot, the same as any other individual, contravene a regulation. in some respects, that would put him as an ordinary person and a common individual, but not as a pilot. No, no more than the first mate, for instance, or the chief engineer, or any other member of the crew of that ship.

Q. Now, Mr. Burnside, this close cooperation between the pilots and the dispatchers and lock-masters is required, I take it, not only for the orderly movement of the traffic, but also for the safety of navigation in general?

A. This is very true.



1 Q As an illustration of the necessity of
2 this close collaboration, I would like to remind you of the
3 very serious casualty that occurred on June 30th, 1959,
4 a collision between the Carl Jurius and the Taxiharis
5 in Lake St. Lawrence. Are you aware of the circumstances
6 of this casualty?

7 A. I recall it, but not in detail. But,
8 Lake St. Lawrence, again, even at that time was not under
9 our immediate pervue. It was in the area that would be
10 administered by the Department of Transport, in the
11 person of the marine agent at Prescott.

12 Q If I may just give you a few details
13 the Carl Jurius was upbound, having left anchorage below
14 Cap Island; the Taxiharis was at anchor in Wilson
15 anchorage, and the Eskimo ...

16 A. That is American waters.

17 Q. And the Eskimo was coming down and
18 returned herself at Radford Island which is, I think,
19 the reported point and the three ships got together at
20 the same point, about the same time, and the Carl Jurius
21 collided with the Taxiharis which later went aground,
22 while the Eskimo had to go outside the channel to avoid
23 the two colliding vessels. Now, there were three pilots,
24 or one aboard each of these three vessels and I suggest
25 to you that if the three pilots had kept themselves
26 acquainted with what they were going to do, this collision
27 would not have happened?

28 MR. LALONDE: May I object to this, my lord.
29 I would think that this witness, first of all, has asserted
30 that this was outside his pervue and outside his knowledge.



1 As far as I can see, if my learned friend --- I do not
2 contest the facts that he asserts --- but if he wants to
3 give evidence himself, he may get into the box, but not
4 give them from the stand of the counsel.

5 THE CHAIRMAN: You may be assured that state-
6 ments of fact made by counsel will have to be proven
7 before the Commission. It is not considered as a fact.

8 MR. BRISSET: I just want to ask the witness
9 if what I just related brings back to his recollection
10 what happened at that time?

11 THE WITNESS: I recall the incident, in a
12 general way, more as any other citizen might recall the
13 reports. The reports, as such, would not come to our
14 office in the detail that it would do, nor would we
15 have anything especially to do about it, as if it were
16 in our own waters, as outside our waters, and the Wilson
17 Hill anchorage is largely within the American waters
18 and that portion of it would be under the pervue of
19 the Development Corporation at Messina, not ours.
20 I am sorry, I am not in a position to answer.

21 MR. BRISSET: If the court would allow me,
22 I would refer the court to the decision rendered in this
23 which was published last month and I can undertake to
24 give the reference to you.

25 THE CHAIRMAN: All right.

26 Q. Now, Mr. Burnside, when there is a
27 casualty you have told us that you would obtain your
28 report from the master. I take it that you do not
29 obtain a report from the pilot --- at least a copy of
30 the report he may himself make to the pilotage authority?



1 Am I correct?

2 A. We do not receive the report from the
3 pilotage authority as such.

4 Q. So you have no way of relating the two
5 reports to determine whether there are conflicting facts
6 recorded?

7 A. It is becoming more common, as time goes
8 on, for the pilot and the master to jointly sign the
9 statement of the master. We do not insist on it and we do
10 not even request it; but this is a growing pattern, I
11 think, in that it is often, in effect, signed by both.

12 Q. Would you think there would be an advan-
13 tage, so far as the St. Lawrence Seaway Authority is
14 concerned, if there was perhaps better liaison between the
15 pilotage authority and your St. Lawrence Seaway Authority
16 in the investigation of casualties?

17 A. I think that closer liaison would be
18 advantageous, of course, unless it became so close that
19 it would interfere with the administrative lines, and
20 that should be avoided.

21 Q. Now, to go to some specific points in
22 your previous evidence. You have mentioned the problem
23 caused by ships that at a time were not properly ballasted
24 before entering the system and have indicated that at
25 times there is a divergency of views between the pilot and
26 the master himself as to whether the ship was or was not
27 properly ballasted?

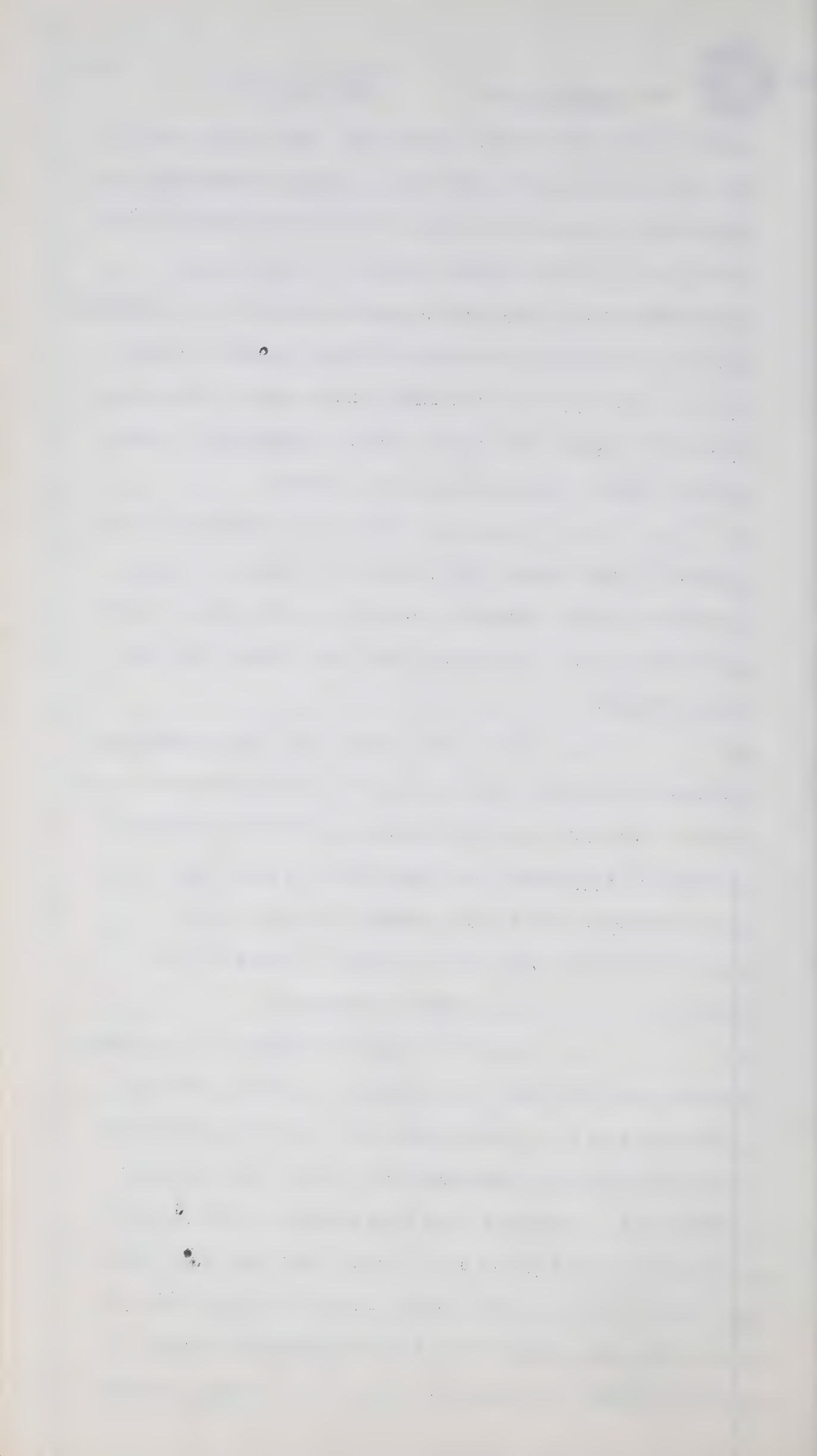
28 A. Situations have arisen where the master
29 is prepared, and even anxious, to bring his ship in and
30 where the pilot would indicate that, in his opinion, the

1 ship is not sufficiently ballasted. That would lead us
 2 to question the master much more closely and perhaps send
 3 officials to examine the ship as she stood before permit-
 4 ting her to enter, because there is a conflict of
 5 interests in that the master may be pressed by over-anxious
 6 agents or owners to proceed and obtain cargo or deliver
 7 cargo; whereas the pilots might be inclined to take some-
 8 what of a wider view, as we would, in desiring to avoid,
 9 at all costs, the blocking of the system.

10 Q. Would you think it advantageous if, in
 11 cases of this nature, the pilot would report to the St.
 12 Lawrence Seaway Authority directly --- the Seaway pilots --
 13 in order to get a ruling and have the matter properly
 14 investigated?

15 A. Yes, I do. Now, this, quite admittedly,
 16 introduces another concept in that our dispatchers do not
 17 talk to the ship in the harbour, to avoid two entities
 18 trying to administer the same article at the same time,
 19 but provision could quite readily be made for the
 20 pilots to make known their opinion in cases of that
 21 kind and it would be a great improvement.

22 Q. You have spoken yesterday of a recommen-
 23 dation that was made --- at least, a matter which was
 24 discussed at one time having to do with the putting on
 25 board of the shore wheelsman and using also linesmen.
 26 There was a newspaper item this morning in the Gazette
 27 which I would like to say to this court does not submit
 28 properly or record the facts. I would not say that the
 29 reporter was biased, even though he must have been, to
 30 have followed the public's view. It is simply an error.





1 It is said in this article that the Shipping Federation
2 of Canada or the Ocean Shipping Industry had agreed that
3 it would be advisable to have the wheelsman from shore on
4 board ships proceeding through the Seaway, but when they
5 knew it would cost they then changed their minds. I am
6 advised that the Ocean Shipping Industry has always been
7 opposed to wheelsmen being put on board from the shore.
8 Is that your recollection?

9 A I have no knowledge of the Shipping
10 Federation favouring the introduction of wheelsmen at
11 all. The article in question is out of context.

12 Q Yes. It was only in connection with the
13 linesmen?

14 A That is correct.

15 THE CHAIRMAN: That is what they recall
16 yesterday.

17 MR. BRISSET: This question of wheelsmen,
18 you told us yesterday, if I recollect properly, that as
19 ship handling is concerned, the master is even better
20 qualified than a pilot to handle the ship, as he was
21 familiar with the characteristics?

22 THE WITNESS: He is better qualified to
23 handle the ship, provided that he is sufficiently
24 experienced with the physical situations which the ship
25 will encounter. If another person --- in this case, the
26 pilots ---- are familiar with the navigating conditions
27 he will meet in the inland seaway, that may cancel out
28 the superior knowledge of the master of the manoeuvra-
29 bility characteristics of his ship. I am thoroughly
30 convinced that the master, normally, is better qualified;



1 he is the most qualified person to understand his ship.

2 Q. Does not the same conclusion apply in
3 the case of a wheelsman? Wouldn't the wheelsman aboard
4 an ocean ship, who has been aboard there for months and
5 has gone in every port in the world, be better qualified
6 to steer that vessel than a wheelsman from the shore who
7 comes aboard and who has never seen a ship and never taken
8 her wheel?

9 A. Now that you are asking me, I must, of
10 necessity, reply: I have boarded ships and gone up the
11 system and found that the pilot had to continually remind
12 the wheelsman to alter the curve of his ship to conform
13 with the curve and character of the channel. He seemed
14 to be following what I understand to be the ocean regula-
15 tion or practice of having the wheelsman adhere to the
16 course given and in this instance it was in the Beauharnois
17 and also in the South Shore, which follows a circuitous
18 route and he continually reminded the wheelsman to change
19 his wheel to avoid running into the bank, which was as
20 close as that door from the ship. And this was a most
21 unusual experience, indeed, because the wheelsmen who
22 are accustomed to the system, keep the ship in the
23 centre of the channel, or to one side or the other, as
24 required by the pilot, without having to be continually
25 reminded of the necessity of keeping the ship in the
26 water, so to speak. This was probably a bit unusual, but
27 it illustrates what I have in mind, and was a fact that
28 as the wheelsman was changed and the new man came up to
29 take his trip at the wheel, the same process proceeded,
30 and the pilot's voice at first was quite quiet when he



1 told him to alter. The second time it rose and the third
2 or fourth time it hit rather a loud and high pitch when
3 he realized that the man was not going to change that wheel
4 unless he did tell him, to avoid the oncoming bank. This
5 would indicate to me that there is quite a field of changed
6 education that should be proceeded with with respect to
7 many wheelmen, at least.

8 I realize that may not be the answer that you
9 may wish to get.

10 Q. No. I am quite happy with the answer.
11 In every field of endeavour there is always room for
12 improvement. That is the only comment I am going to make.
13 But at least the question is certainly debatable, as you
14 will agree, that the Ocean Industry has been approached
15 of that change?

16 A. I have no **indication** that they favour it.
17 I do not recall having been advised that they had actively
18 opposed it. You would be in a position to know, but I
19 do not know that.

20 Q. Have you been able to check, since
21 yesterday, the actual estimate of the cost of linesmen?

22 A. No, I was not. The question also
23 included an opinion as to whether the costs were still
24 applicable and our office is reviewing the situation with
25 that in mind. Up to the present time we were not in any
26 position to reply.

27 Q. I would like to come to another error in
28 the same article of the Gazette of which I am speaking.
29 The Seaway Authority does provide linesmen into locks them-
30 selves?



1 A. That is correct.

2 Q. And this is paid by the Authority and
3 is part of the dues that are charged to the Shipping
4 Federation?

5 A. That is also correct.

6 Q. And the linesmen we have been talking
7 of are only linesmen provided at the approach walls and
8 not in the locks?

9 A. That is true. They would consist of
10 further men at the lock structures but include the
11 approach walls in the servicing of shore-based linesmen.

12 Q. You have told us that in the four years
13 of operation of the Seaway --- not quite four years ---
14 there were two accidents to vessels linesmen being landed
15 ashore. Are those the only two recorded during that
16 period that you have knowledge of?

17 A. I recall that... I do not recall that
18 I said there were only two, I do not think. I have no
19 recollection of that. I said that I recalled one linesman
20 having met his death by drowning; but there were other
21 circumstances which were perhaps not as they should have
22 been in connection with it. But there was a case, if I
23 may speak from something of which I haven't precise
24 knowledge --- this occurred in an American lock. Perhaps
25 I should not discuss that. I do not know it well enough.

26 There was another one referred to yesterday
27 in which I couldn't recall the precise details and that
28 is being searched for in our files and will, I hope, be
29 there when I arrive tonight, so that it can be reviewed.

1 My impression is that there were other factors involved,
2 not confined to the man on the wall, but I am not in a
3 position to state until I have reviewed the record.

4 Q. In fact, as regards the second casualty,
5 I understand that the man was ashore, it had nothing to do
6 with his landing ashore?

7 A. We had a man killed at one of our locks
8 by a line. It happened to be a nylon line and it sprang
9 with great velocity and force like a piece of elastic and
10 severed the man's body. It had nothing to do with the
11 landing of a man. It was one of our own men, shore-based.
12 The firm opinion we had at that time was that the nylon
13 line was dangerous. The regulations state that the line
14 must be played off a winch, and with a nylon line the
15 winch, to accommodate it, would be too big for the ship.

16 Now, in this connection, just quickly, there
17 was a process involved of putting a bite on the end of
18 the line in the form of a piece of nylon, and it, too, was
19 dangerous, so therefore the lines must be of one character
20 throughout their length.

21 Q. However, in this procedure which
22 involves some risks accidents will happen, and the only
23 point I want to make is that the record is comparatively
24 free of accidents.

25 A. The record is quite good, yes.

26 Q. There was one statement you made, Mr.
27 Burnside, yesterday which I want to take up with you. You
28 said that ocean ships were short-staffed. What do you
29 have in mind actually? Do you refer to officers on the
30 deck as well?

1. The first part of the paper is devoted to a general

discussion of the problem and the main results.

2. The second part is devoted to the proof of the

main theorem of the paper.

3. The third part is devoted to the proof of the

corollaries of the main theorem.

4. The fourth part is devoted to the proof of the

lemma of the main theorem.

5. The fifth part is devoted to the proof of the

lemma of the main theorem.

6. The sixth part is devoted to the proof of the

lemma of the main theorem.

7. The seventh part is devoted to the proof of the

lemma of the main theorem.

8. The eighth part is devoted to the proof of the

lemma of the main theorem.

9. The ninth part is devoted to the proof of the

lemma of the main theorem.

10. The tenth part is devoted to the proof of the

lemma of the main theorem.

11. The eleventh part is devoted to the proof of the

lemma of the main theorem.

12. The twelfth part is devoted to the proof of the

lemma of the main theorem.

13. The thirteenth part is devoted to the proof of the

lemma of the main theorem.

14. The fourteenth part is devoted to the proof of the

lemma of the main theorem.

15. The fifteenth part is devoted to the proof of the

lemma of the main theorem.

16. The sixteenth part is devoted to the proof of the

lemma of the main theorem.

17. The seventeenth part is devoted to the proof of the

lemma of the main theorem.

18. The eighteenth part is devoted to the proof of the

lemma of the main theorem.



1 A. I have had complaints from ships'
2 officers to the effect that they had to remain on the
3 bridge much longer than they were accustomed to do with
4 this type of operation, and they apparently are deficient
5 in their deck officers, also in their deck crews. We
6 noticed this most obviously in the Welland where they
7 spend some hours of the day continuously tying from the
8 approach walls in the process of proceeding through the
9 locks, and we very frequently see ocean ships coming to
10 the approach walls and landing a seaman, and he is
11 either inept in some cases or he is of perhaps deficient
12 physical stamina, because he cannot pull the lines ashore
13 as quickly as he should and he is out there struggling
14 with the line. And there is a tendency also on behalf
15 of the ships to fail to throw the line on a bollard at
16 the earliest opportunity, and if there is a wind, and
17 frequently if there is no wind, the single linesman is
18 not physically strong enough to get it on the bollard,
19 to get it ashore and put it on the bollard on time.
20 If there were two men they could put it ashore and put
21 it on the bollard in time. Part of this is due to the
22 fact that the linesman aboard the ship doesn't play it
23 out quickly enough or lay it on the deck to play it out
24 quickly enough, so there is some tension on the linesman
25 when he carries it ashore and it falls off; he makes
26 a very sorry pass at it at times. Perhaps if there were
27 a few more crewmen aboard, this would be avoided.

28 Q You are aware that as far as manning
29 is concerned all foreign ships are subject to Government
30 regulations determining how many men they should have in



1 total. In other words, there is a manning scale under the
2 law.

3 MR. LANGLOIS: No, I don't think that exists
4 in Canada anyway.

5 THE WITNESS: There is a provision that the
6 ship must be adequately manned, and I think that we could
7 find the way to proceed. If it were ~~thought~~ to be possible
8 to do so without causing undue economic load to fall on
9 one specific trade, it would be better if they had more
10 men. I think that under our regulations and the rules
11 that exist we could say that the ship was understaffed,
12 but it is a marginal thing. It probably entails the use
13 of a man to see that they are paid overtime rather than
14 using a sufficient number of men. It may come, we may
15 have to, but it is better if it comes from the trade
16 itself rather than us, far better in total result, if it
17 comes in time.

18 Q. There is in all these problems an
19 economic aspect?

20 A. That is right.

21 Q. Both as regards linesmen and Seaway tolls,
22 cost of pilotage, cost of additional staff, the total of
23 which the Seaway Authority is fully alive, I take it?

24 A. We are certainly conscious of that
25 question.

26 Q. In other words, there can be a point of
27 no return; if it is too costly to enter the system the
28 ships will not go?

29 A. That is a factor.

30 Q. Are you aware that it costs between

The following information is for your information

1. The first item is the name of the person

who is the subject of the report

2. The second item is the date of the report

3. The third item is the name of the person who

prepared the report

4. The fourth item is the name of the person

who is the subject of the report

5. The fifth item is the name of the person who

prepared the report

6. The sixth item is the name of the person who

is the subject of the report

7. The seventh item is the name of the person who

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8. The eighth item is the name of the person who

is the subject of the report

9. The ninth item is the name of the person who

prepared the report

10. The tenth item is the name of the person who

is the subject of the report

11. The eleventh item is the name of the person who

prepared the report

12. The twelfth item is the name of the person who

is the subject of the report

13. The thirteenth item is the name of the person who

prepared the report

14. The fourteenth item is the name of the person who

is the subject of the report

15. The fifteenth item is the name of the person who

prepared the report

1 \$1,500.00 to \$2,000.00 for a trip in the lakes through
 2 the system for an ocean vessel?

3 A. I am not in the possession of knowledge
 4 as to the cost to ocean ships.

5 Q. Is the Seaway Authority ever consulted
 6 in any way in the matter of the pilotage tariffs within
 7 your sector?

8 A. Not to my knowledge.

9 Q. Do you think there would be an advantage
 10 if your Authority were consulted in this regard,, when the
 11 time comes to fix the tariffs?

12 A. Specifically, I would think that that
 13 might rest with others. The Authority would be interested
 14 in any factor which would affect the volume of traffic
 15 moving within its limits, but I don't see any specific
 16 advantage in enlisting the support, if that is what you
 17 mean, of the Authority in the matter. We wouldn't seek
 18 it, I don't think.

19 Q. However, in view of your experience
 20 in the movement of ships in the system, would you say
 21 that you are quite in a good position to evaluate the
 22 services rendered by the pilots?

23 A. We would be in a good position to
 24 evaluate the efficient operation of the ship as it
 25 concerns its passage through our system. I don't
 26 know that we would seek any such further duties which
 27 you imply.

28 MR. LANGLOIS: My lord, before we carry on,
 29 since my learned friend just mentioned in his cross-
 30 examination of the witness regulations as to the manning

1 of ships, I would like him to supply the Commission with
2 any such regulations here in Canada. I myself don't know
3 of any, either in England or in the States, and I would
4 remind the Commission that this very question has been
5 under dispute for a number of months on the west coast as
6 between the owners of the tugboats and the unions
7 representing the crew members, and so far the Department
8 of Transport of Canada has been unable to find any legis-
9 lation on which it could base itself to settle the
10 problem. But if my learned friend has some information to
11 the contrary, that such regulation exists, I think he
12 should supply the Commission with this information.

13 MR. BRISSET: Well, I am advised, my lord,
14 that there is a manning scale and regulations in the
15 United Kingdom. In Canada I am not in a position to
16 say, except that as we have no ocean ships, hardly, the
17 point may not arise.

18 MR. JACQUES: I might add on this question,
19 my lord, that the only comments are contained in the
20 International Convention, in the safety of life at sea.
21 It says that the ship must be manned with a sufficient
22 number and adequate number of crew.

23 THE CHAIRMAN: So eventually, if anybody
24 has any further evidence on the matter, I think they
25 should state that on the record next week.

26 MR. LANGLOIS: My lord, I have a few
27 questions of the witness which may take us to five
28 o'clock, but I understand my learned friend has some
29 questions.

30 MR. JACQUES: I do.

1 MR. LANGLOIS: I would like to know if Mr.
2 Burnside would be available.

3 MR. JACQUES: Mr. Burnside, we wouldn't want
4 the Seaway to stop operating completely for the Royal
5 Commission. Do you think you could come back next week?

6 THE WITNESS: I could indeed, yes.

7 MR. JACQUES: Would first thing Tuesday
8 morning be convenient to you, or would you rather come
9 back during the week?

10 THE WITNESS: With the exception that it
11 might be possible to process some of the questions which
12 have been asked by late Tuesday or Wednesday. I know
13 that some of our people who are knowledgeable of the
14 conditions of the files and the data will already be on
15 their way for an extended weekend. While I have requested
16 that the files be placed in the office that we may look
17 over them this weekend, they might not all be there.
18 I think it might be advisable if I had half a day at
19 least, Tuesday, if it is convenient.

20 MR. JACQUES: Well, Tuesday, Wednesday or
21 Thursday.

22 THE WITNESS: Wednesday would be satisfactory.

23 MR. JACQUES: Wednesday morning at ten o'clock.
24 Would that be convenient?

25 THE WITNESS: Yes.

26 THE CHAIRMAN: And you may assume that you
27 are going to be the first witness and you will be finished

28 MR. JACQUES: My lord, in order not to take
29 my friends by surprise, I have been supplied with a list
30 or, rather, a statement showing the vessel delays on

1 account of lack of pilots from the St. Lawrence Seaway
 2 Authority, Eastern Region, South Shore Canal, St. Lambert
 3 Lock. I have submitted this document to the witness and
 4 asked him to prepare himself to give evidence on this
 5 document.

6 MR. LANGLOIS: This document is going to be
 7 filed later on?

8 MR. JACQUES: Later on it will be filed, yes.

9 MR. LALONDE: Is this part of the evidence
 10 of the Seaway?

11 MR. JACQUES: No, it does not come from the
 12 Seaway.

13 MR. LALONDE: Is this document from the
 14 Pilotage Authority?

15 MR. JACQUES: Yes, it is.

16
 17 BY MR. JACQUES:

18
 19 Q. Now, one question before you go.
 20 Did you say that there was a section in the Canada
 21 Shipping Act which stipulated that radio operators --
 22 that there would be someone on board ship who could
 23 speak English? Is that what you said? I have not been
 24 able to trace that section.

25 A. Words to that effect were used. I
 26 would give you the copy which I have with me which you
 27 might perhaps be better able to explain or identify than
 28 I.

29 MR. JACQUES: Oh, I see. This is what I
 30 suspected, my lord. It is not in the Shipping Act, it is



1 in an Order in Council entitled "Ships Station Radio
2 Regulations, Part II,, amended, dated Ottawa 15th
3 August, 1957." It is number 338, Section 56, Subsection
4 3, which reads in part: "... that there is on board a
5 person who holds a "radio-telephone operator's certificate
6 not lower than restricted category and who can send
7 correctly and receive correctly in the English language.
8 He shall issue a radio inspection certificate to the
9 ship for operation on the Great Lakes." This appears
10 to be applicable to ships not registered in Canada.
11 Anyway, the Orders in Council will be obtained from the
12 Department of Transport and filed before the Commission,
13 my lord.

14 THE CHAIRMAN: Very good. So we will adjourn
15 now for the weekend and we will reassemble on Tuesday
16 at ten o'clock at the same place here.

17
18
19 ---Whereupon the hearing adjourned at five p.m. until
20 Tuesday, July 2nd, 1963 at ten a.m.
21
22
23
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27
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30

The first part of the paper discusses the importance of the study of the history of the English language. It is noted that the English language has a long and rich history, and that the study of its development is essential for a full understanding of the language. The paper then goes on to discuss the various factors that have influenced the development of the English language, including the influence of other languages, the influence of social and cultural changes, and the influence of technological advances. The paper concludes by noting that the study of the history of the English language is a fascinating and important field of research, and that it is essential for anyone who is interested in the English language to have a good understanding of its history.

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ROYAL COMMISSION

ON

PILOTAGE

HEARINGS

HELD AT

MONTREAL
QUEBEC

VOLUME No.:

40 A

DATE:

July 2, 1963

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ROYAL COMMISSION ON MARINE PILOTAGE

Proceedings of the hearing
held at the Court House,
Montreal, Quebec, on the
2nd day of July, 1963.

COMMISSION:

The Honourable Mr. Justice Bernier	Chairman
Robert K. Smith, Esq., Q.C.	Member
Harold A. Renwick, Esq.	Member
Mr. Gilbert Nadeau	Secretary

COMMISSION COUNSEL:

Mr. Maurice Jacques	
Mr. Leopold Langlois, Q.C.	for the Canadian Merchant Service Guild

PRESENT:

Mr. J. Brisset	for the Shipping Federation of Canada
Mr. J.M. Jacques	for the National Harbour Board
Mr. J. Mahoney) Mr. C. Mason)	for the Dominion Marine Association
Mr. Marc Lalonde	for the Federation of St. Lawrence River Pilots; Corporation of the Lower St. Lawrence Pilots; the Corporation of the Mid-St. Lawrence Pilots; the Corporation of the Montreal Harbour Pilots; the Corporation of the St. Lawrence River and Seaway Pilots; the Corporation of the Upper St. Lawrence Pilots

Captain J.S. Scott, Technical Advisor to the Commission

Captain F.S. Slocombe	for the Department of Transport and liaison officer
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ench 1 ---ON COMMENCING AT 10:00 A.M.

AG/RPS 2

3 ROGER THIBODEAU, Sworn

4 MR. JACQUES: Before hearing the witness, if
5 there are no objections I would like to submit different
6 documents emanating from the National Harbours Board,
7 amongst which is a French copy and an English copy of the
8 Annual Report of the National Harbours Board for the year
9 1961. The report for the year 1962 is not ready yet.

10

11 ---EXHIBIT NO. 479: French and English copies
12 of the Annual Report of the
13 National Harbours Board for
the year 1961.

14 MR. JACQUES: And as Exhibit No. 480, an Order
15 in Council extending the boundaries of the Montreal harbour,
16 Order in Council No. PC 1960-1486, dated October 28 1960.

17 This is a photocopy, and if there are any
18 objections we will obtain a certified copy of the same
19 document.

20

21 ---EXHIBIT NO. 480: Photocopy of Order in
22 Council No. 1960-1486.

23 MR. JACQUES: And as Exhibit No. 481, a plan of
24 Montreal harbour, No. 13183 dated April 3 1962.

25

26 ---EXHIBIT NO. 481: Plan No. 13183.

27

28 MR. JACQUES: And another plan of Montreal harbour,
29 in colour, indicating the boundaries of the harbour, the
30 channel, and different navigation aids. It is plan



rench 1 dated January 1st 1962. There is no number on this plan.

2

3 ---EXHIBIT NO. 482:

Plan of Montreal harbour
in colour dated January 1st
1962.

4

5

6 DIRECT EXAMINATION BY MR. JACQUES:

7

8

Q. Mr. Thibodeau, would you please give the
Commission you full name and age?

9

A. Roger Thibodeau, I am 46 years old.

10

Q. What is your profession?

11

A. Civil engineer.

12

Q. Since when have you been a civil engineer?

13

A. For 23 years.

14

Q. What is your present position?

15

A. Assistant Engineer of the Harbour.

16

Q. Since when have you been Assistant Engineer of the Harbour? I suppose it is the Montreal harbour?

18

A. Yes.

19

Q. Since when?

20

A. For the past six years.

21

Q. Are you aware about the dredging and the silting places in the Montreal harbour?

23

A. Yes, in the boundaries of the jurisdiction.

24

Q. I would like to refer to the plan before you, Exhibit No. 481. Could you please tell the Commission

26

if this plan indicates the present boundaries of the Montreal harbour, according to the different Orders in

28

Council applying thereto?

29

30 A. Yes. This shows only half of the harbour, from the tip of the island until Sorel. There is the other



French 1 part of Victoria Bridge at the tip of the island, which
2 doesn't seem to have been indicated. I think it can be
3 seen on the copy of the coloured plan.

4 Q. Exhibit No. 482. Do these two plans give
5 the whole scope of the Montreal harbour?

6 A. Yes.

7 Q. Could you please tell the Commission if
8 the National Harbours Board takes care of dredging within
9 Montreal harbour?

10 A. Yes. We undertake maintenance dredging
11 only.

12 Q. Could you please indicate according to the
13 two plans before you where exactly you do this maintenance
14 dredging?

15 A. In Exhibit No. 481 we do no dredging at
16 the present time.

17 Q. What do you mean by at the present time?

18 A. Well, with the development of the harbour
19 later on perhaps we will be called upon to do some dredg-
20 ing, but up to the present time we have not undertaken
21 any dredging in this part of the harbour.

22 Q. If my information is correct the St.
23 Lawrence River dredging is done in the river as well as
24 in the harbour?

25 A. Yes.

26 Q. Could you tell the Commission the jur-
27 isdiction of these two authorities?

28 A. To make it easier I could submit a plan
29 which is similar to Exhibit No. 482, but which is not in
30 colour, and on this plan I have indicated, coloured in pink,



French 1 the part for which I have responsibility.

2 MR. JACQUES: That is submitted as Exhibit No.
3 483.

4
5 ---EXHIBIT NO. 483: Plan similar to Exhibit
6 No. 482.

7 Q. So, on Exhibit 483 the red tracing indicates
8 the place where the National Harbours Board does some
9 maintenance dredging?

10 A. Yes.

11 Q. Could you please give to the Commission
12 the exact places of dredging, and the cycles of silting
13 in those places?

14 A. One must know that within the boundaries
15 of the Montreal harbour the St. Lawrence River is not
16 considered as a river which has a great deal of materials
17 at the bottom of it. However, in the red traced part
18 there is constantly some deposits which are accumulated,
19 emanating all coming from different sources.

20 The main sources are the following: Rocks,
21 brought about each year by ice; and then the refuge from
22 the Montreal sewage system and of different municipalities;
23 then the dust coming from the loading of our vessels,
24 which are loading grain, so this is grain dust; and in
25 the part which is called Windmill Point Basin, which is
26 at the extreme western part of the harbour, in that area
27 there are many deposits coming from the handling of coal.

28 At all wharves we regularly have some deposits
29 or refuge coming from vessels in the handling of merchand-
30 ise.



French 1 Those are the main sources which make us
2 maintain our wharves in order to keep them at the proper
3 depth.

4 Q. Do you undertake this maintenance every
5 year, every springtime?

6 A. Well, this dredging is done during the
7 whole year on a continual basis, according to the follow-
8 ing method. Every springtime, upon the opening of the
9 navigation season, we found all our wharves, in order to
10 see if in the course of the past winter there has been
11 certain deposits accumulating which could be harmful to
12 navigation, or which could impede navigation.

13 Now, the results of these soundings are
14 indicated on plans which allow in turn our cleaning
15 teams to go to the exact places, the exact areas, and
16 to try and take away the different obstructions.

17 Q. Now, you said that you were doing some
18 dredging during the whole year on a constant basis.
19 Is that true?

20 A. Yes, we have a certain crane working during
21 the whole year.

22 Q. Naturally you can't do everything at the
23 same time. In the springtime as soon as you are through
24 with your soundings, are your dredgers starting work
25 immediately?

26 A. Well, the dredger starts to work immed-
27 iately by keeping in constant contact with the harbour
28 master, who according to the information received indicates
29 to us the places where there won't be any vessels that
30 would keep us from doing our work.



French 1 Q. At certain places there has been some
2 sedimentation and silting, and in these same places
3 where you do not do any dredging do you keep the ship-
4 owners, or everybody using this place, advised of this
5 information?

6 A. No. Our information is given only to
7 the harbour master.

A2 8 Q. You don't know if the harbour master
9 gives this information to any other parties?

10 A. No.

11 Q. How long does it take to do a complete
12 dredging cycle in the Montreal harbour? Let us say to
13 dredge once the whole Montreal harbour at the expected
14 level?

15 A. Well, it is very hard to answer this
16 question, or to give you an accurate period of time, for
17 the very good reason that years follow one another, but
18 aren't similar. There are certain places at different
19 wharves where we never find any obstacle, but in other
20 areas there are deposits which have to be dredged.

21 Now, if I had to clean, or dredge the Montreal
22 harbour as a whole, on what is indicated in red on the
23 map, well, it would be difficult to estimate how long
24 it would take. It all depends on the accumulation on
25 the river bed.

26 Q. What quantity of material have you found?
27 Do you have statistics concerning the preceding years?

28 A. I have prepared here the quantities of
29 materials that were present in 1961 and 1962.

30 MR. JACQUES: Could we submit this chart, entitled



French 1 "Maintenance Dredging Quantities in the Summers 1961 and
2 1962".

3

4 ---EXHIBIT NO. 484: Chart entitled Maintenance
5 Dredging Quantities Summers
6 1961 and 1962.

7

8 Q. Could you please explain Exhibit No. 484?

9 On the left column which mentions locations, do they
10 have any reference on the plan that is before you, Exhibit
11 No. 483?

12 A. Yes, we can find all the different
13 sites on the plan.

14 Q. So jetty No. 1 would be indicated on the
15 plan?

16 A. Yes, on the extreme left, in the King
17 Edward Basin.

18 Q. Thank you. So this column starts
19 westward in order to come back eastward?

20 A. No. The basins aren't in this order,
21 west to east. They are rather compiled according to the
22 sequence which has been followed in these two years.

23 Q. In the quantities which are indicated
24 in cubic yards, what thickness does that represent on the
25 river bed?

26 A. Well, this varies enormously. Whenever
27 we do the sounding at spring we discover that the thickness
28 which would be harmful to navigation varies from one and
29 one half up to two, three and up to five feet in thickness.

30 Q. Do you think that those areas where the
thickness is greatest are always the same areas?



French 1 A. Yes, generally speaking we notice that
2 the most subjected to silting are the same spots.
3 This comes back periodically.

4 Q. Could you please indicate these different
5 areas?

6 A. Well, the worst areas where one must
7 dredge are the Windmill Point Basin, which is on the
8 extreme left of the plan; the entrance to Lachine Canal,
9 which follows immediately afterwards; and then the
10 sewer of Papineau Street, Section 26.

11 Q. Section 26 is not indicated in your
12 summary of the different dredged quantities?

13 A. This is because in the course of the last
14 two years we didn't have to do any work, or any dredging,
15 in that particular area, but this usually gives rise to
16 most troubles or difficulties. Pier 48, Southerland
17 Pier, and Pier 101 west, which is the interior basin for
18 the Imperial Oil Company, which is on the extreme right of
19 the plan for oil companies, and then Pier 103 north, which
20 is the Shell Oil basin; then Pier 106 west, which is the
21 interior basin of the British American; and Pier 110 west,
22 which is the interior basin of Montreal East.

23 Q. Do you dredge every year in those areas?

24 A. No, not every year.

25 Q. Do you take soundings every year?

26 A. Yes.

27 Q. When you dredge, to what depth do you
28 dredge?

29 A. Well, we dredge at the depth indicated
30 on the plan by figures 30, and in certain places 29, 28, 27-1/2.



rench 1 Everything depending upon the area.

2 Q. Is it indicated between piers?

3 A. It is indicated in the area in red.

4 Q. Now, in those areas you say that you don't
5 dredge every year. Do you have some silting occurring
6 every year?

7 A. Not necessarily every year. Our sound-
8 ings at spring indicates if there was silting in those
9 different areas.

10 Q. I see on Exhibit 484, Sections 1 and 10,
11 in 1961 you had 1,175 cubic yards, and in 1962 1,050 cubic
12 yards? Could you please explain that?

13 A. Well, according to me this great accumu-
14 lation in that particular area is not caused by sedimentation,
15 but rather by a sewage system from Montreal East at that
16 particular spot.

17 Q. Do you have to dredge quantities like that
18 every year?

19 A. Well, in this particular area yes.

20 Q. On the same exhibit, 2, 3, 4, 5, 4,200
21 cubic yards in 1961, 7,575 cubic yards in 1962?

22 A. Well, this is the basin where every year
23 we have the greatest amount of deposits.

24 Q. What types of deposits do you have in
25 that basin?

26 A. Especially some very fine particles in
27 suspension which are dropped by the Lachine Canal upon the
28 opening and closing of the locks.

29 Q. Do you have to dredge quantities similar
30 to those every year in this area?



ench

1 A. Well, in this area we dredge from four
2 thousand to five thousand yards every year, but the
3 seven thousand represents an exceptional quantity..

4 Q. What is the depth?

5 A. 34 feet.

6 Q. When you don't have time to do dredging,
7 and a boat having a great draught has to use those piers,
8 what do you do then?

9 A. Well, so far as I know whenever it is
10 discovered that there has been sedimentation of great
11 thickness we inform the harbour master about that fact,
12 who in turn, being the one who tells the vessels where
13 to go, must take these obstructions into account in order
14 to direct properly the different vessels.

15 Q. According to your best knowledge, has it
16 happened that you were required to do some dredging at
17 particular areas in an emergency in order to receive
18 certain ships?

19 A. No, not in the way you mention, not
20 before the arrival of a vessel.

21 Q. You said these soundings take place at the
22 beginning of the year. During the course of the year,
23 or after the dredging, do you verify the depth of what
24 is in the Harbour of Montreal?

25 A. Yes, when the dredging is finished in
26 a given part we do some soundings in this part to make
27 sure that the required depth is guaranteed.

28 Q. Do you have charts indicating this
29 depth of those waters?

30 A. Well, we have a chart which we readily



ench 1 send to the harbour master, indicating the spots which
2 have been dredged, and indicating that they now have the
3 required depths.

4 Q. How many soundings a year do you do on
5 an average?

PE/RPS 6 A. I would say that our teams are dredging
7 about 50 or 60 per cent of the time.

8 Q. Yes. How many times do they go around
9 the Harbour in Montreal in one year?

10 A. We cover the harbour entirely twice a year,
11 but there are some spots which are covered much more often
12 than that.

13 Q. Which places?

14 A. Places where we know that there is a lot
15 of deposits, where there is more deposits.

16 Q. And there you are dredging more of them?

17 A. Yes.

18 Q. You have mentioned dredging. You said
19 that you cover the Harbour of Montreal. Does this include
20 as far as dredging is concerned only the pink parts in
21 Exhibit 483?

22 A. Yes, only the parts indicated in pink.

23 Q. I understand that the St. Lawrence Ship
24 Channel also dredges in Montreal harbour?

25 A. If they are required to, they should, yes.

26 Q. Who has fixed the limit of the places
27 where you dredge?

28 A. This is an amicable understanding between
29 the Ship Channel and ourselves.

30 Q. Do you have any silting or erosive problems



French 1 coming from excessive speed from ships?

2 A. Not in the pink parts.

3 Q. In the harbour in any other places?

4 A. Not to my knowledge.

5 Q. Do you -- and when I say "you" I mean the
6 National Harbours Board -- do you make any surveys of
7 currents in the Harbour of Montreal?

8 A. No.

9 Q. Did you carry out any studies on the
10 movement of ice in the Harbour of Montreal at the opening
11 of the navigational season?

12 A. Yes. During the last two or three winters
13 we conducted some surveys to find out what is the movement
14 of ice within the harbour.

15 Q. Can you describe those kind of studies?

16 A. This expert study survey takes place when
17 the ice is forming. We have a team which once a week
18 covers certain spots, which are pre-determined spots, and
19 there they measure the height of the water, the thickness
20 of the ice and they also take note of any movement of ice
21 which might have taken place during the week.

22 Q. What does the result of these surveys
23 indicate to you?

24 A. The aim of the surveys is to try to
25 determine or to forecast the movement of ice for the
26 future construction of our piers, which would make it
27 possible for us to find out at which height we have to
28 build those piers to avoid water going over the piers.
29 There has been no results with any kind of precision. We
30 are just at the stage of studying those results now. I have



French 1 also prepared a table indicating the places and the differ-
2 ent readings which have been taken at different places
3 from 1960 to 1963. This is during the winter period also
4 and it only indicates the movement of ice.

5 MR. JACQUES: Could you deposit, as Exhibit 485,
6 a document which is called "Survey of River Gradient during
7 Ice Conditions for the years 1960 to 1963."

8
9 ---EXHIBIT NO. 485:

A document called "Survey
of River Gradient during
Ice Conditions for the years
1960 to 1963."

10
11
12 Q. Will you explain this table to the
13 Commission, starting from the left column.

14 A. The first sheet gives the readings which
15 have been taken during the month of January of 1960, 1961,
16 1962 and 1963. A similar sheet, and it gets the same
17 readings for February and for the month of March.

18 Q. So the dates are in the left side column?

19 A. Yes. The dates at which the readings
20 were taken is the lefthand side and the other columns are
21 the observation posts which have been established.

22 Q. Now, the figures indicated under each
23 post, would you explain them to us, please?

24 A. These figures indicate the elevation of
25 the water at the indicated places given in what we call
26 the harbour datum.

27 Q. The first figure is 116 point something;
28 does this mean that we have 116 feet of water?

29 A. No. This is a reading which is attached
30 to a level system which has been established in the harbour



French 1 and which has a relation with what we call the mean sea
2 level.

3 Q. But what I understand is if these figures
4 are in feet, this represents one hundred and sixteen feet
5 point something?

6 A. No. This means an elevation. This means
7 that at a particular place the water is at elevation
8 116.

9 Q. So does this refer to the figure 100?

10 A. No. With the figure zero, we would now
11 explain here the relation that these figures have with the
12 elevations of the Geodesical Service.

13 Q. Can you please explain this to us?

14 A. At the Montreal Harbour, in order to make
15 our studies and our work easier, we have adopted a system
16 of elevation which corresponds to the Geodesical Service.
17 We have taken the mean level, the average level of low
18 waters, which had been established at 18.2 mean sea level
19 -- elevation above the level of the sea, 18.2 feet above
20 the level of the sea, and we have said that this elevation
21 corresponded to an elevation in the harbour of 93.71 feet.

22 Q. 93.71 feet?

23 A. It might be easier to say that the zero
24 mean sea level corresponds to a height of 75.59 as a height
25 in the Harbour of Montreal. Mean sea level at zero equals
26 75.59 feet in the Harbour of Montreal. The reason for
27 this was that in order to avoid in the harbour to have
28 for the rest of the sea and our piers some negative elevation,
29 so the elevation indicated on the table, if we take away
30 the reference 75.59, we will obtain this way the elevation



ench 1 of those different places above the sea level.

2 Q. Now, I understand Exhibit 485 indicates
3 the height of the ice?

4 A. No; the height of the water under the
5 ice.

6 Q. What is the average thickness of the ice
7 here in Montreal, in January and February?

8 A. Well, the thickness of the ice varies
9 from three to four feet.

10 Q. Now, this table, Exhibit 485, does not
11 indicate at all the movement of the ice?

12 A. No.

13 Q. It does not indicate if ice piles up in
14 one part of the harbour more frequently than other places
15 because of tide and because of wind?

16 A. No, not at all.

17 Q. So it is only the depth of the water which
18 is available during the month of January and February at
19 these places?

20 A. Yes.

21 Q. Do you know if there are any pipes or
22 telephone or telegraph cables which cross the Harbour of
23 Montreal in the bottom?

24 A. Not that I know of.

25 Q. There are no pipes?

26 A. Yes. There are pipes at Montreal. There
27 are two pipes. When I say two, I am not sure. I know
28 that there are pipes which cross the river, bringing oil
29 to the installations on the pier.

30 Q. To your knowledge, we have already asked



French 1 the National Harbours Board -- I mean, have the interested
2 parties been asked to get those pipes to cross at some
3 other places so that the ships can anchor at those places?
4 Do you sometimes at the National Harbour Board have
5 requests to proceed to do some dredging at given places
6 besides the dredging that you are doing yourselves? Do
7 you have requests for dredging?

8 A. There have been some of these requests.
9 They did not come to my knowledge. It went to higher
10 authorities.

11 Q. To your knowledge, have there been some
12 complaints to the National Harbour Board about the depth
13 of waters which are available in the red part of Exhibit
14 483?

15 A. I am not aware of any complaints which
16 would have been made directly to me. What I know is what
17 I hear, that sometimes the harbour master says that at
18 certain places vessels complain about the depth of the
19 water.

20 Q. Now, in your section of the administration
21 of the National Harbour Board, has your section either
22 by the master of the harbour or anybody else, have you
23 been required to go and verify the depth of the waters?

24 A. Yes.

25 Q. What have been the results of such
26 verifications; who was right?

27 A. At certain times we have found out that
28 there really was an obstruction at the place which had
29 been mentioned.

30 Q. And after this discovery, have measures been



French 1 taken to rectify this?

2 A. Yes. As soon as the pier was available,
3 the harbour master gave us the instructions to go there
4 and to take away what was necessary to take away to give
5 the proper depth.

6 Q. And in the meantime, until you proceeded
7 to do that, did you advise the users of the pier of such
8 an obstruction?

9 A. No. My relations were only with the
10 harbour master.

11 Q. You do not know if this information has
12 been transmitted to others?

13 A. No; I do not know at all.

14 Q. Do you take away the obstructions which
15 are in the Harbour of Montreal, obstructions which might
16 come from a ship which has sunk, and so forth?

17 A. No. When such things have taken place,
18 then contracts have been given to private companies.

19 Q. Did you have anything to do with those
20 contracts?

21 A. Not personally, no.

22 Q. To the best of your knowledge, are those
23 contracts granted by the National Harbour Board?

24 A. I think so.

25 Q. You are not sure of that?

26 A. No; I am not sure.

27 Q. I do not remember if you have already
28 answered these questions, but have you carried on surveys
29 on currents in the harbour?

30 A. No.



French 1 Q. Have you already been asked to do so?

2 A. No.

3 MR. JACQUES: Thank you Mr. Thibodeau. Your
4 witness.

5

6 CROSS-EXAMINATION BY MR. LALONDE:

7 Q. Mr. Thibodeau, you have declared that
8 you proceeded to dredge the places which are indicated
9 in pink on Exhibit 483 until you reached the depth which
10 is indicated on the chart. Right?

11 A. Yes.

12 Q. Can you tell me what this could represent?
13 Could this represent a difference of three and four feet
14 from when you started dredging until when you are finished
15 to get the basin at the pier at the requested depth?

16 A. The thickness depends from the deposits
17 which took place and since the last time when we did our
18 sounding and the time when we are required to dredge in
19 those places.

20 Q. What was the most considerable thickness
21 of deposits which you have taken by your pier to bring
22 it to its normal depth?

23 A. Four feet.

24 Q. Four feet? Was this near pier 234; was
25 it in Windmill Point Basin?

26 A. To my knowledge, this took place in three
27 places: Windmill Point Basin, the entrance of the channel,
28 piers 2 and 3 and at the entrance of Montreal East.

29 Q. Now, this dredging, was that a regular
30 scheme of dredging or do you remember if it was a dredging



French 1 which was made on request following a complaint?

2 A. No. This was a routine dredging.

3 Q. Was there any notices to seamen which
4 were regularly sent informing them of the fact that the
5 depth in these basins, for instance, was not the depth
6 as it appeared on the charts?

7 A. Not to my knowledge. I couldn't tell you.

8 Q. Now, if notices to seamen had to be sent,
9 would they be written by you or somebody else?

10 A. By somebody else.

11 Q. How much time elapsed between the moment
12 when the dredging was finished, in these places where there
13 was as much as four feet of sedimentation, and the time
14 when you have been made aware of such sedimentation? Was
15 the interval a question of months or weeks?

16 A. There again, the interval might vary accord-
17 ing to the time elapsed since we had made the preceding
18 soundings; but I would say that it is no more than four
19 or five months.

20 Q. At certain places you use such soundings.
21 Do you make them with mechanical instruments? Technically,
22 how do you do such soundings?

23 A. There is two ways of sounding. The first
24 one is with a mechanical instrument, which is a steel bar,
25 which we sound under a barge at the required depth and
26 they are proceeding very slowly on the side of the piers.
27 If there is obstruction, this bar, which is at a given
28 elevation, is hit on one side or the other and this is
29 indicated on an indicator which is on the deck of the
30 ship and this indicator gives you, in feet and inches, the



French 1 obstruction which is made.

2 Q. Is this the only technique?

3 A. No. We also use an echo-sounder and we
4 also proceed to sound by hand.

5 Q. By hand?

6 A. By hand -- what we call sounding by hand.
7 In such cases, we take a 20-pound lead weight and we
8 tie it to a chain with graduations and when the weight
9 gets to the bottom we read on the chain the depth of the
10 water at that given place.

11 Q. Is there any reason why you use these
12 three different techniques? Does that mean that there
13 is not one perfect technique or one technique which is
14 satisfactory?

15 A. No. Those techniques each give results
16 which can be interpreted differently. First, when we
17 use the bar, we want to know in such a case if there are
18 obstructions higher than a given level. The bar will not
19 tell you what is the exact depth of a given spot. If we
20 guarantee 30-feet of depth at a pier, we place the bar
21 at 30 feet and we are only interested to find out what
22 is above 30 feet. We are interested to know if there is
23 32 or 35 feet.

24 The echo-sounder gives very good results; but,
25 once again, very often we use the hand method to have
26 more details at a very well-determined spot. The hand
27 method gives you the exact depth at the places where you
28 do the sounding.

29 Q. If I understand properly, the echo-sounder
30 would not be, by itself, a sufficient technique for the



rench 1 information which you need ?

2 A. Well, the experience which we have with
3 the echo-sounder, we always do also the hand technique
4 with it.

5 Q. Do you give the depth on the charts at the
6 side of the pier itself?

7 A. Yes.

8 Q. Did you have any complaints during the
9 last two years when the water was maybe lower than usual
10 to the effect that some vessels had some difficulty to
11 leave the basins because they were touching the bottom,
12 because of a considerable load which they had or because
13 of the fact that the basin was not of the required depths?

14 A. When there are such complaints, they are
15 never directed to me directly.

16 Q. You are not aware yourself of such
17 complaints?

18 A. Yes, through the harbour master, who advises
19 me of such complaints.

20 Q. You have declared, I think, that you have
21 never been asked to do any dredging before the arrival of
22 a vessel -- immediately before the arrival of a vessel.
23 Does this mean that you were required to do some after the
24 arrival of a ship or before the departure of a ship?

25 What did you mean when you said that you have never been
26 required to do any dredging before the arrival of a ship?

B3 27 A. Well, you see, we do the following. We
28 use the following method. We pass the bar to find out if
29 there is obstruction or not. There is an obstruction of,
30 say, two feet, right away we advise the harbour master.



ench 1 Then he tells us if he can send a ship to this pier or
2 not, according to the draught of the given vessel, and
3 if this is a pier with a guaranteed depth of 30 feet and
4 if there is an obstruction of two feet, at the first
5 occasion the harbour master asks us to go and take away
6 this obstruction so that the next time the vessel with
7 a draught of 30 feet can dock there.

8 Q. You have referred in your testimony to
9 two pipelines which would cross the river within the
10 Harbour of Montreal. If you will look at Exhibit 483,
11 are those pipelines indicated?

12 A. Yes.

13 Q. Now, can you describe approximately the
14 place where you find them?

15 A. One of them is at the limit between Section
16 107 and 108 and which appears, I think, just in front of
17 the Town of Montreal East, as indicated and on the other
18 extremity as Dufau Island.

19 Q. Now, the two pipelines are close to one
20 another?

21 A. Yes. The second one arrives on the piers
22 at Section 100 and the angle of crossing the river is
23 different for the two pipelines.

24 Q. Are they just deposited at the bottom of
25 the river or are they under the ground?

26 A. To my knowledge, they are under the ground.

27 Q. Do you know at which depths?

28 A. No.

29 MR. LALONDE: Thank you.

30



French CROSS-EXAMINATION BY MR. LANGLOIS:

2 Q. Mr. Thibodeau, when you use the hand
3 method for sounding, do you also use that same method of
4 sounding to determine the nature of the bottom of the
5 river?

6 A. No, no. This method cannot be used for
7 that purpose.

8 Q. Isn't it possible, by putting some tallow
9 in your weight, to catch the sediments in the bottom of
10 the river and to determine their nature?

11 A. This might be possible but we have never
12 done this in Montreal.

13 Q. You do not do it? Now, at which places
14 generally will you throw away what you collect in doing
15 the dredging operations?

16 A. This is thrown away outside of the limits
17 of the channel, in places that we look for and which change
18 from one time to another.

19 Q. But this is thrown away within the limits
20 of the harbour?

21 A. Yes, all the time.

22 Q. Now, at which distance from the piers
23 do you do the dredging? You indicated in pink, on Exhibit
24 483, the places where you do the dredging; but what is
25 the distance from the place where you do the dredging and
26 the walls of the pier?

27 A. This varies according to the construction
28 of the pier. In our modern piers, we dredge to the face
29 of the pier itself, to the wall of the pier.



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Thibodeau, cr.ex. 4610
(Langlois)

With all the piers which are built of wood caissons the distance varies according to the places, and it can reach five feet.

Q. Five feet from the outside wall of the pier?

A. Yes.

Q. If during the dredging you find an obstruction 50 feet from the pier, do you take it away, or do you ask the ship channel authority to do it?

A. If it is within our limits, we do it ourselves. If there was an obstruction within the limits under the jurisdiction of the ship channel, we wouldn't know, because we never go there very far.

Q. But when you do your dredging, to what distance from the pier in the direction of the channel do you go?

A. Well, as indicated on the coloured chart, you can see that this varies quite a bit. We have occasion, when we had our understanding, a certain number of feet from certain spots, and we have drawn straight lines in certain places we have one, two, 150 feet. You can see that, the chart being at scale. You can see it according to the thickness of the pink line.

MR. LANGLOIS: That is all. Thank you.

CROSS-EXAMINED BY MR. J. M. JACQUES:

Q. In order to avoid any confusion whatsoever, I would like to call your attention to Exhibit No.



1 482. You stated that Exhibit 482 indicated the
2 boundaries of the Montreal Harbour. I think this is not
3 quite accurate, but correct me if I am wrong.

4 The south shore of the river is not indicated
5 on this plan. The whole south shore is not indicated on
6 this plan, although it is included in the Montreal Harbour
7 boundary?

8 A. Yes, that is right. Part of the south
9 shore is not included on this plan.

10 Q. Concerning Exhibit No. 484, the figures
11 that you gave concerning the quantities of dredged
12 material. Are those solid matters, or matters containing
13 water when you have measured them?

14 A. The quantity indicated is solid matter.

15 Q. You have mentioned that the depth of
16 water was guaranteed at the pier to be 30 feet?

17 A. In certain places, yes.

18 Q. But in other places the guaranteed
19 depth is different?

20 A. Yes.

21 Q. Now, this guaranteed depth depends upon
22 the level of the river?

23 A. This depth is guaranteed starting at the
24 limit of the low water.

25 Q. And if the level is inferior to that,
26 then the guaranteed depth will be inferior?

27 A. Yes.

28 CROSS-EXAMINED BY MR. BRISSET:
29

30 Q. Do you think that the pilots of the harbour



1 and the river pilots have access to the result of the
2 soundings that you undertake every season?

3 A. No.

4 Q. Whenever you undertake dredging at a
5 pier in order to put it at the right depth, are the pilots
6 informed about this work?

7 A. No, not to my knowledge. I couldn't
8 tell you.

9 Q. Are they informed of the result of this
10 work? For example, that the depth of the water is at the
11 guaranteed depth?

12 A. Well, to my own knowledge, as I stated
13 before, the Department of Engineers will give their
14 information to the harbourmaster, and what he does with
15 that information I couldn't tell you.

16
17 MR. LANGLOIS: There was a question I had
18 forgotten to ask you before on Exhibit No. 484, where
19 you give quantities; are these quantities measured on
20 the spot or measured on the barges?

21 THE WITNESS: It is measured on the
22 barges.

23
24 THE CHAIRMAN: Mr. Thibodeau, on Exhibit No.
25 485, the study made by the different persons is done in
26 the Winter period. I see that between the Champlain
27 Bridge and Section 110 in Montreal East there is a
28 difference of 21 feet, 18 inches, or 15 feet, all depen-
29 dent on the ice.

30 Could you please tell me what is the difference



rench

1 in the Summer when there is no ice? Could you give us
2 the figure, approximately, in order to find out what is
3 the difference between the Champlain Bridge and the
4 eastern boundary of the harbour? Is the Champlain Bridge
5 higher than the Rapids?

6 THE WITNESS: No, it is below the Lachine
7 Rapids.

8 THE CHAIRMAN: So, strictly speaking, there
9 should not be any difference in level from the Champlain
10 Bridge to the other end of the island?

11 THE WITNESS: Yes, there is an appreciable
12 difference between the Champlain Bridge and what we call
13 the tip of the island.

14 THE CHAIRMAN: Without there being any rapids?

15 THE WITNESS: Yes, without there being any
16 rapids. Unfortunately I couldn't give any approximate
17 figures even on that.

18 THE CHAIRMAN: Could you please obtain this
19 information and give it to us?

20 THE WITNESS: Yes.

21 THE CHAIRMAN: I would like to have this
22 information for all the points indicated on Exhibit No.
23 485 under normal conditions in the Summertime.

24 The level in the harbour at the present time,
25 whenever you say that a pier is at 30 feet, is that in
26 1962, 1945, or has there been any change since?

27 THE WITNESS: Well, the guaranteed depth you
28 mean?

29 THE CHAIRMAN: Yes?

30 THE WITNESS: Well, those depths are quite



1 stable, constant.

2 THE CHAIRMAN: And according to the testimony
3 we have heard up till now it seems that there was a
4 decrease in the level of the St. Lawrence waters in
5 Montreal Harbour?

6 THE WITNESS: Yes. This is something that
7 we notice at the present time.

8 THE CHAIRMAN: And there was still enough
9 water so that when the level decreased your guarantee
10 of depth would be still guaranteed, or did you have to
11 dredge?

12 THE WITNESS: No, because we had lower levels
13 than the guaranteed minimum.

14 THE CHAIRMAN: So I suppose that in such a
15 case it is the harbourmaster who sees to it that the
16 vessel is not directed to those piers, because he takes
17 into account this difference in levels?

18 THE WITNESS: Yes, naturally.

19

20 RE-EXAMINED BY MR. JACQUES:

21

22 Q. A last question concerning Exhibit 482.
23 Could you please explain what the different colours on
24 this plan indicate?

25 A. Pale green indicates the water of the
26 river outside of the navigation area, or navigation
27 channel, with the exception of the part of the St. Lawrence
28 Seaway Authority; dark green indicates the channel where
29 the navigation can be made within the boundaries of the
30 harbour. Near the wharves whenever the depth of the



French 1 water is lower than 35 feet of the navigational area,
2 well, the green is lighter and the depth of water is
3 indicated in small figures, or small type figures.
4 Now, the yellow indicates approximately the area under
5 the jurisdiction of the Montreal Harbour; the port
6 installations are indicated in brown, for example, the
7 elevators and so forth.

8 Q. On the right end of the plan there are
9 certain charts indicating data on the following places:
10 Shedded berths and open berths, and we can find some
11 quarter depths.

12 Do you think that these figures are revised
13 every year, or whenever a new plan is printed?

14 A. These figures are revised if we change
15 the depths, but normally whenever a depth is established,
16 well, it remains as such for a number of years.

17
18 BY MR. J. M. JACQUES:

19
20 Q. Mr. Thibodeau, in order to get back to
21 the exhibit that you have just been discussing, in order
22 to sum up, the dark green that represents the part of
23 the river where the depth is at least 35 feet?

24 A. Well, at least 35 feet below an established
25 limit.

26 Q. I am going to get back to that. And now,
27 the pale green represents the river bed where the depth
28 is less than 35 feet?

29 A. Yes.

30 Q. Always concerning the exhibit that you



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Thibodeau
(J.M. Jacques)

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have before you, on the right side corner you have a

3

frame indicating the boundaries of the harbour of Montreal.

4

You can see that?

5

A. Yes.

6

Q. Now, the three last lines there, depths

7

of water, could you please read them?

8

A. All depths of water shown are referred

9

to extreme low water level of 1897 which at section

10

north-west ---

11

Q. Is it not number 12?

12

A. Yes, perhaps number 12, yes. At

13

section number 12, that is it, is equal to elevation

14

93.71 harbour datum.

15

Q. This means that at a given point where

16

we show on this map that the depth of the water is, oh,

17

let us say, 30 feet, that means that there are 30 feet

18

of water at that particular place, so long as the general

19

river be not lower than 93.71?

20

A. Yes, under section 12.

21

THE CHAIRMAN: We will now recess for a few

22

minutes.

23

24

---A short recess.

25

26

THE CHAIRMAN: Gentlemen, we know that it is

27

very warm, and we realize it, because we are a little

28

higher than you are, so it is supposed to be a little

29

warmer at this particular level, but just the same we

30

are sitting, and the whole organization and the framework



French 1 has been prepared, so consequently we must go on with
2 our work.

3 If there are possible steps to take in order to
4 help out, for instance the witness is tired. He only has
5 to say so, and we will recess more often. Or if counsel
6 wish to adjourn, they must tell us.

7 We will try to work as much as possible in
8 the morning, and we perhaps could shorten the sittings
9 during the afternoon, but we would like to do as much
10 work as possible while we are in Montreal, so we are all
11 in the same boat.

12
13 FERNAND BESSETTE, sworn:

14
15 DIRECT EXAMINATION BY MR. JACQUES:

16
17 Q. Would you please tell the Commission
18 your full name and age?

19 A. Fernand Bessette, 44 years of age.

20 Q. What is your occupation?

21 A. Professional engineer.

22 Q. By whom are you employed?

23 A. Federal Public Works, Montreal District.

24 Q. Since when?

25 A. Well, I have been at the Department for
26 13 years.

27 Q. Could you please tell the Commission
28 what are the boundaries of the Montreal District?

29 A. Well, if we take the St. Lawrence River
30 as an east-west axis of the district, on the north shore



rench 1 our department goes to the Ontario border, downstream, and
2 to go up to the extremity of Champlain County, that is
3 to Ste. Anne de la Perade. At the south shore we go to the
4 American border up to the eastern limit of Nicolet County,
5 Gentilly.

6 Q. What is this part of your district which
7 includes the pilotage waters, or where pilotage is done in
8 the St. Lawrence River?

9 A. To my own knowledge, only the St.
10 Lawrence. The Richelieu can be navigated upon, but I
11 don't think there are any pilots on the Richelieu. There
12 is also the Ottawa River up to the extremity of Argenteuil
13 County, past Granville.

14 Q. Do you do any dredging in the St. Lawrence
15 River?

16 A. In the main channel of the river, no.
17 Our main dredging is restricted to the access channel,
18 or to the main channel, but the river is under our
19 District.

20 Q. Within the limits of your District do
21 you do some dredging in the harbours?

22 A. Yes, we maintain especially the Sorel
23 Harbour. Now, so far as the other harbours are concerned,
24 or small harbours or wharves which are not used on a
25 commercial basis ----

26 Q. Do you dredge in the Three Rivers Harbour?

27 A. Well, it is not under our jurisdiction.
28 It is under the jurisdiction of the National Harbours
29 Board.

30 Q. Could you say a few words about the



trench 1 dredging at Sorel? Do you do some maintenance dredging
2 in that harbour?

3 A. Yes, we maintain the basins, and in the
4 preceding years we have widened these basins, and
5 deepened them.

6 Q. Now, this maintenance dredging, could
7 you please tell us how you do it exactly? What is the
8 cycle, the rate of sedimentation, or silting, in the
9 Sorel Harbour, and the soundings that you do in the
10 harbour?

11 A. Well, the Sorel Harbour has periods that
12 may vary whenever we have some claims, or whenever we
13 deem it necessary to proceed with some dredging. We
14 do it periodically, and following soundings prepare plans
15 and specifications, and undertake the dredging by
16 contract, on a basis which is called space measurement,
17 that is on the basis of sections of materials taken in
18 the harbour.

19 Q. And this maintenance dredging, do you
20 think this is a cycle that is done every year?

21 A. No, although at certain places, especially
22 those which are at the extreme part, or at the entrance
23 of the Richelieu River are more susceptible than in
24 other places to have some silting, and we can say that in
25 these areas perhaps we have a cycle of four years. So
26 every four years we must do this dredging, although at
27 the entrance of the Richelieu this may happen more
28 often, but we consider a four-year cycle as the basis of
29 our operations.

30 Q. And at Sorel?



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1 A. I am talking about Sorel.

2 Q. Oh, I am sorry. Could you determine
3 the nature of the silting? What is its position?

4 A. Well, the silting has as its main cause
5 the sedimentation of the Richelieu River at its
6 entrance, which is caused by a slowing down of the
7 current and the meeting with an angle current which
8 promotes deposits at the extreme part of the Richelieu
9 River, that is at the entrance of the Sorel Harbour.

10 Q. Did you see that there was some sedimentation
11 which resulted from erosion caused by excessive speed of
12 vessels in Sorel Harbour?

13 A. No.

14 Q. Other places?

15 A. Elsewhere naturally we protect the banks
16 in many areas within our Department. We protect them
17 by protection walls of different types, different
18 structures, and this constitutes, I would say, probably
19 half of our work in our District of Montreal.

20 Q. Well, half of your work in the District
21 of Montreal?

22 A. Yes, the most difficult places being
23 areas of Champlain, Ste. Marthe, Sorel, Ste. Anne de
24 Sorel, Tracy, Contrecours, Vercheres, and other places,
25 Lanoraie, on the south part of St. Ignace, and other
26 places.

27 Q. Could you please explain the nature
28 of the work done in order to avoid erosion? You talked
29 about a wall?

30 A. Well, we have different types of structures.



1 Some of them are quite rudimentary as far as the
2 engineering aspect of it, but just the same they give good
3 protection, and we have some walls, and we have certain
4 steel walls, others in concrete, and we built some
5 masonry walls where the erosion isn't too strong, because
6 stone masonry makes a type of wall which is less costly,
7 and in the past year we have developed a type of wall
8 which is built at an angle for the most difficult sectors,
9 where there is the greatest amount of erosion.

10 That is Champlain, Cap de la Madeleine and Ste. Marthe.

11 Those are concrete walls, with a base of concrete
12 protected by another part in front, which are tilted in
13 a two-in-one process, and are going to protect the
14 banks up to an elevation of two or three feet above the
15 normal level of water.

16 Q. They are tilted towards the river or the
17 land?

18 A. Well, towards the land.

19 Q. You said that there was something that
20 was put in front of that structure? I didn't get the
21 word properly?

22 A. The lower part of the wall is protected
23 moreover by a rip ramp. The French word is *perre*. This
24 is a kind of stone sidewalk which must be of a certain
25 weight, so that the movement of water, especially at
26 low tide, may not erode the structure below the
27 foundation.

28 Q. What is the word you used?

29 A. *Perre* is the French word.

30 Q. Could you give us an idea of the amount



1 spent by your Department for these works during the past
2 years?

3 A. Well, this is difficult to declare
4 exactly, because those works, although they are submitted
5 to estimates, are dependent upon different things. On
6 an average we can spend on the St. Lawrence and the
7 Richelieu ---

8 Q. Well, for the St. Lawrence alone?

9 A. Well, it can reach one half or three-
10 quarters of a million dollars per year.

11 Q. So much for the building of walls and
12 other types of protection?

13 A. Yes.

14 Q. When you said that erosion was caused
15 by the movement of ships, perhaps I am wrong. Would you
16 explain?

17 A. There are many different causes, natural
18 causes, due to the water on the coast is at a certain
19 level, and which brings certain materials, and it is
20 also caused by deprivation of water during the summer,
21 and icy conditions in winter. Also the natural waves
22 caused by wind. So our Department at the present time
23 follows the following policy: To try to protect the
24 river at a place where erosion is accelerated, or
25 caused in part by the movement of ships.

26 Q. Well, how can you determine the part
27 played by the movement of a vessel?

28 A. Well, this is a question which is hard
29 to answer, and which is also highly controversial,
30 because we can't determine exactly what is the part of



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1 erosion caused by the passage of a ship, because the
2 waves are stronger than those caused by wind, and this
3 percentage may vary enormously, according to the nature
4 of the soil of the coasts. It may vary also with the
5 different places where the main channel is nearer the
6 coasts.

7 Q. Has your Department ever thought of
8 restricting the speed of vessels in the river in order to
9 avoid this type of erosion?

10 A. I know that we have received many com-
11 plaints coming from coastal owners, because there were
12 certain vessels in areas where the erosion is the
13 strongest, or where the soil is the least advantageous,
14 that certain of these owners transmitted these claims,
15 either through their associations or personally, to the
16 effect that ships were increasing this possibility of
17 erosion, because they were going at too high a speed.
18 Naturally, the Sorel Agency submitted a report about that
19 to our superiors in Ottawa. I don't know if certain
20 steps have been taken, or what type of steps have been
21 taken.

22 Q. Do you receive complaints on the part of
23 pilots concerning the depth of water in the Sorel Harbour
24 and at the entrance of the Richelieu?

25 A. Well, to my knowledge I don't think we
26 have received any complaints from pilots, but I think
27 that certain shipping companies, especially a
28 company in the Sorel Harbour, tell us so at times, that
29 certain depths of water in the Sorel Harbour in certain
30 areas of that harbour aren't sufficient.



(Jacques)

1 Q. So what do you do in such a case?

2 A. We go on the spot and do some soundings,
3 and if we find that the complaint was valid, we prepare
4 a contract asking for bids for such a contract to do the
5 dredging to have the proper depth.

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1 Q. Do you do the inspection in the Harbour
2 of Sorel?

3 A. Not that I know of. As I said in the
4 beginning, we know, through experience, that certain
5 places in the Harbour of Sorel have a cycle of sedimenta-
6 tion or of silting, let us say, of two or three years.
7 So if we receive no complaints at all telling us that
8 at certain places the channel does not have the
9 required depth, we do our own soundings there and we know
10 beforehand that we have a great number of deposits to
11 dredge away at these given places.

12 Q. Now, the information which you obtain
13 on these soundings, do you transmit this information to
14 pilots and shipowners?

15 A. No. To my knowledge the only information
16 which we transmit is the plans for sounding after the
17 dredging has taken place. I am speaking of the channel
18 matter, and they are sent by our head office, I think,
19 to the Eighth Navigation Branch of the Board of Transport.

20 Q. Do you receive sometimes regularly
21 some requests from pilots or shipowners asking you for
22 information on the depth of the waters in Sorel?

23 A. It happens sometimes when a vessel with
24 a draught of 30 feet, let us say, which is the limit
25 within the Harbour of Sorel --- Now, I am speaking in
26 cases where the company will come and ask us if this
27 depth of 30 feet really exists.

28 MR. JACQUES: Thank you. Your witness.
29
30



CROSS-EXAMINATION BY MR. LALONDE:

Q. Mr. Bessette, if I understand properly, your section does some dredging in the whole district?

A. Yes, we do. We do dredging. Our dredging, of course, does not concern the main channel of the St. Lawrence, but all the channels which go into the different rivers, let us say ---- the liaison between the main channel of the St. Lawrence to the channel of the other rivers.

Q. So you do not touch the main channel of the St. Lawrence?

A. No.

Q. So the only places where vessels with a high tonnage go is the Harbour of Sorel?

A. Well, let us say ocean-going vessels with 30 foot draught, or less.

Q. Now, would you answer my question.

A. In the Harbour of Sorel we do some dredging. Excuse me, I am confused. I am answering with the question.

Q. My question was: Do you maintain some parts of the St. Lawrence River which is where vessels of high tonnage go outside the Harbour of Sorel?

A. No. We have two channels which have a superior depth for a sector at the entrance of the Richelieu River where we have 25 feet. I do not think that we maintain any channels of more than 15 feet and most of the time less than 15 feet.

Q. Now, did you undertake any studies or



rench 1 surveys to try to find out what proportion of erosion
2 might be due to the passage of ships and what proportion
3 might be due to natural causes?

4 A. No.

5 Q. Could you give us an idea?

6 A. It is very difficult to do so, because
7 the erosion depends on the emplacement of the channel in
8 relation to the banks; so we have not undertaken any
9 surveys on this question.

10

11 CROSS-EXAMINATION BY MR. LANGLOIS:

12

13 Q. Mr. Bessette, always on this question of
14 erosion --- according to your experience, has it been
15 possible for you to establish a relation between the
16 speed of the ship and its draught and the effects of this
17 on erosion?

18 A. No. We have not studied this question.
19 We inspect the courses and we see very often some vessels
20 going back and we chart that according to the policy of
21 the Department of Transport and we can say that some part
22 of the erosion is due to acceleration of the waves, which
23 is caused by the ships.

24 Q. Now, as a professional engineer with
25 experience in maritime channels, can you tell us if,
26 according to that, that the draught of the ship might
27 have an influence on erosion, in addition to the speed?

28 A. I would think so.

29 MR. LANGLOIS: Thank you.

30



r/Eng

CROSS-EXAMINATION BY MR. MASON:

Q. Is your agency concerned only with maintenance dredging or do you do original dredging as well? That is the planning?

A. Yes. We do some maintenance dredging and we also undertake dredging and we do sometimes some new dredging. But this is, I think, in the sectors dealing especially for the channels which might interest fishermen or recreational boards or fishermen who are going fishing on Lake Ste. Pierre and these channels usually have a depth of about five or six feet for very small vessels. This is the only kind of new dredging that we do.

Q. With regard to the Harbour of Sorel, has your agency had anything to do with the original dredging of the main channel?

A. No --- in Sorel, no, no more than anywhere else. We do not look after the main channel for the ships. This is not under our jurisdiction. We maintain one entrance of the Sorel main channel as far as the Harbour of Sorel, at a depth of 32 feet, as far as the line, let us say, which will be perpendicular to the two piers which exist at a distance of 200 feet of the face and of the Harbour of Sorel itself, except a basin which is between Pier 1 and Pier 2, which we call Basin Lancteau, which has a depth of 25 feet. I must say that since our Department has sold Pier 1, which is called an elevator pier, which was sold at the end of 1961 or the beginning of 1962 --- I don't remember exactly ---



Fr/Eng 1 to Northern American Elevator, there is a band, let us
2 say, of 80 feet wide on the northern face and alongside
3 the Richelieu, which is considered as a private basin
4 and for which our Department does not do any maintenance.

5 MR. MASON: Thank you.

6
7 H. L. LAND, sworn:

English 9 DIRECT EXAMINATION BY MR. JACQUES:

10
11 Q. Would you state your full name and
12 age, please?

13 A. Herbert Land.

14 Q. And what is your age?

15 A. 61 is my age.

16 Q. What is your profession?

17 A. I am Chief of the St. Lawrence Ship
18 Channel Division, Department of Transport.

19 Q. Are you a civil engineer?

20 A. Yes.

21 Q. How long have you been a civil engineer?

22 A. Since 1930-1931.

23 Q. How long have you been with the St.
24 Lawrence Ship Channel?

25 A. Since June, 1931.

26 Q. How long have you been Chief of the
27 St. Lawrence Ship Channel Division?

28 A. Since January, 1958.

29 Q. Would you, as a preliminary, explain to
30 the Commission the extent of the ship channel?



English 1

A. Yes. The ship channel proper extends

2

2

from the foot of Lachine Canal to Deep Water, below
Quebec, approximately 40 miles below Quebec. Those are
the present dimensions of the ship channel, as far as
length is concerned. For many years, we have not done
anything in the south channel, which extended down to
Baie St. Paul and Ile Coudres.

8

Q. Now, again as a preliminary, would you

9

trace the history of the St. Lawrence Ship Canal for the
benefit of the Commission?

10

11

A. Yes. The first dredging of the St.

12

Lawrence River below Montreal started in 1844 under the

13

Board of Works. After the union of Upper and Lower

14

Canada, a strait channel was started from the upper end

15

of Lake St. Peter. It was abandoned in 1847 when the

16

Government decided, or the authorities at that time

17

decided to follow the natural channel, which is quite

18

winding and we still have that winding channel through

19

Lake St. Peter.

20

Now, in 1851, the responsibility for the

21

ship channel dredging was turned over to the Harbour

22

Commissioners of Montreal. The first Harbour Commission

23

was formed in 1830, but they only took over responsibility

24

of the dredging in 1851. They imposed tonnage dues

25

but they still found it difficult to carry on and in

26

1888 it was decided, in view of the immensity of this

27

project, to make it a national one. Consequently,

28

the responsibility was transferred to the Department of

29

Public Works where it rested until 1904 and then an

30

Act of Parliament was passed transferring the ship



English 1 channel work to the Department of Marine and Fisheries
2 at that time. Later on Fisheries became a separate
3 department and in 1937 the Department of Transport was
4 formed and it included the ship channel as one of its
5 branches. Later on, in the reorganization of the
6 Department, the ship channel became a division under the
7 Marine Works Branch and that brings us pretty well up to
8 date.

9 Q. Up to date. You were requested to
10 prepare certain information concerning the maintenance
11 of the channel. Before going into the detail of the
12 information, would you tell us or tell the Commission
13 if your Department or authority, whatever it is called,
14 carries on any surveys of any kind in the St. Lawrence?

15 A. Yes. Our surveys concern, chiefly,
16 the maintenance, sounding and sweeping; but in order to
17 put that on a sound basis, we have to complete triangula-
18 tion survey for the control of our working plans on a
19 large scale, 500 feet to the inch.

20 Q. Would you explain what this triangulation
21 survey is?

22 A. That is an establishment of fixed
23 points, like lights, churches and outstanding buildings,
24 and even trees, which are fixed on the plan so that the
25 exact location --- that is, to the nearest foot --- is
26 known. These points control our fixing of positions
27 by sextant angles so that theoretically, at least, it
28 is possible to indicate your position of a ship to within
29 a matter of five or ten feet, even when the ship is
30 moving.



English 1

Q. You said that you carried on

2 triangulation surveys. Why surveys?

3 A. In order to establish these points, it
4 is required to have a datum plan, not only in a
5 horizontal position, but also in a vertical position ---
6 elevations as well as horizontal distance. The points
7 that are marked on a plan are fixed, as near as it is
8 possible to plot them. That coordinates the whole
9 channel all the way from Montreal down to the end of
10 our operational district.

11 Q. So you have this kind of survey and
12 also soundings?

13 A. Yes.

14 Q. And sweeping?

15 A. Yes, sweeping and soundings, wherever
16 there is filling in the channel.

17 Q. Do you carry on a survey of currents?

18 A. Yes, we do. Recently, we have established
19 a hydraulic section in the ship channel division that
20 includes the measurement of currents, velocities of
21 currents and direction of currents, as well as measure-
22 ments of flows and quantity of water flowing through any
23 certain section.

24 Q. Do you carry on any survey on the move-
25 ment, the formation and movement of ice?

26 A. In a general way, we use the reports
27 which are sent out several times a day during the ice-
28 breaking operations. We follow the formation of the ice
29 in the early Fall and Winter to determine where and how
30 it is forming and how fast.



English₁

Q. Would you get the information from
someone else?

A. Yes, from our officers and our representatives on the ice-breakers. We are responsible for the ice-breaking ---- that is, the ship channel is --- between Montreal and Quebec in the Winter.

Q. Now, sir, I believe there is a vast difference between capital dredging and maintenance dredging?

A. Yes, there is.

Q. Would you explain the amount of capital dredging which you have done in the channel, say, for the past five years? That reminds me, have you a plan of the channel with you?

A. Yes. I have a general plan. It is shown in more detail on the charts.

Q. The plan might be more convenient for reference.

A. This, of course, is on a small scale and it would be, at the best, schematic, but it does show the channel in relation to the rest of the river.

Q. From Montreal to Quebec?

A. From Montreal to Quebec, and we have a section below Quebec as well.

MR. JACQUES: I should like to file this plan as Exhibit No. ...

THE SECRETARY: 486.

MR. JACQUES: 486, being a plan of the St. Lawrence Ship Channel between Montreal and Quebec, dated August, 1961.



glish

Land, d. ex. 4634
(Jacques)

---EXHIBIT NO. 486: Plan of the St. Lawrence Ship
Channel, between Montreal and
Quebec, dated August, 1961.

THE WITNESS: This portion is the area below
Quebec. (Produces)

MR. JACQUES: And as Exhibit 487, a plan of
the River St. Lawrence Ship Channel between Quebec and
Father Point, undated.

---EXHIBIT NO. 487: Plan of the River St. Lawrence
Ship Channel between Quebec
Father Point, undated.

MR. JACQUES: And as Exhibit 488, a third
plan, that of the Saguenay River, dated September, 1948.

---EXHIBIT NO. 488: Plan of Saguenay River,
dated September, 1948.

THE WITNESS: On that last plan, I should
explain that we are responsible for the channel between
St. Fulgence and Chicoutimi in the Saguenay River. May
I carry on, as there is another plan here?

Q. Yes.

A. We are also responsible for the maintenance
surveys and maintenance dredging in the non-canal reaches
of the Canadian sections of the St. Lawrence Seaway. I
have the plan of that section here. (Produces) This
indicates our areas of responsibility.

MR. JACQUES: May we have this plan marked as
Exhibit No. 489, for identification, being the St. Lawrence



English 1 Seaway, Montreal to Lake Ontario, plan No. 6346.

2 Q. The areas for which you are responsible
3 in the Seaway are shown in red in this Exhibit 489?

4 A. Yes.

5 MR. JACQUES: Thank you.

6

7 ---EXHIBIT NO. 489: Plan of St. Lawrence Seaway,
8 Montreal to Lake Ontario,
9 Plan No. 6346.

10 Q. Would you give us a summary of the
11 capital dredging which has been done in the St. Lawrence
12 Ship Canal over the past few years?

13 A. We have had an average expenditure ---
14 is that what you want?

15 Q. This would be a good way of illustrating
16 that?

17 A. ...of three and a half million dollars
18 per annum, approximately, for the last five years in
19 capital dredging --- that is improvement of the channel ---
20 deepening and widening of the channel.

21 Q. Roughly speaking, are you able to tell the
22 Commission what is represented in improvements, width or
23 depth?

24 A. Yes, when I say "deepening", our deepening
25 program was really completed in 1952, excepting for the
26 maintenance which is done practically every year; but the
27 widening program we are now aiming for a channel at least
28 800 feet wide all the way down from Montreal to Quebec.

29 Q. What is the depth now at the narrowest
30 point?



lish

1 A. 550 feet and about 50 miles remains to
2 be done to complete it to 800 feet. That is 50 miles
3 out of the 103 miles of dredging between Montreal and
4 Quebec, with practically half completed --- a little more
5 than that --- to 800 feet.

6 Q. How long have you been at that widening?

7 A. This present widening program was started
8 in 1952, the present widening to 800 feet, and it will
9 be carried on for another --- we hope we can do it in
10 five years. It depends on how much appropriation we
11 are able to procure.

12 Q. How much money you get?

13 A. Yes.

14 Q. That is as regards widening. Now, what
15 about deepening of the channel?

16 A. The deepening of the channel was really
17 completed to 35 feet in 1952 all the way along. I
18 mentioned maintenance dredging. Do you wish me to ...

19 Q. I would rather stay with capital.

20 A. Capital dredging was completed at that
21 time.

22 Q. This depth of 35 feet, what is its
23 reference point?

24 A. There are really two reference points.
25 The charts are referred to the extreme low water of 1897.
26 Now, we have a dredging datum which is deeper than that,
27 but it varies from a little over two feet, in Montreal
28 Harbour, to six inches in Sorel and it increases, below
29 Sorel, to an average of a foot and three quarters through
30 Lake St. Peter, past Three Rivers, and then gradually



English 1 it decreases to where it meets the other datum at Cap
2 Charles. The reason for the difference in Sorel is the
3 fact that we have five submerged weirs in the subsidiary
4 channels in the Sorel Islands.

5 Q. What is a weir?

6 A. That is a dam and it is a loose stone
7 dam. It has no control gates on it. It is filled in,
8 but on an elevation just below water level, so that at
9 an extremely low flow it holds back the water and
10 produces more depth in Sorel than we would obtain without
11 it. So, we gain a foot in Sorel.

12 Q. And this increased the water within
13 Sorel Harbour?

14 A. That is correct. And the addition of
15 this in Montreal is anywhere between four and five inches;
16 so, without a dam we would be even lower than we are
17 today in Sorel.

18 Q. Would it be fair to say then that the
19 available depth of 35 feet is standard below which the
20 actual water level seldom goes? Is that it?

21 A. We like to think that, but our depths
22 in the river are dependent on supplies from the Great
23 Lakes and the Ottawa River. The last few years we have
24 had very low supplies.

25 Q. What is the reason?

26 A. Low precipitation, low rainfall and
27 very low snowfall during the Winter, so that this
28 business comes in cycles.

29

30



/AC
ish

1 In '33 to '36 we had a very low cycle of supply,
2 that the water level in Montreal was far below what it is
3 today, and then we had a fairly good supply ever since.
4 Then, with variations, the curve didn't go as low as it
5 did in '35 and '36. It is now quite low, and indications
6 of that it may be at the bottom of the curve.

7 Q In terms of peak of water available what
8 does that represent?

9 A. Well, today for instance we have an
10 elevation, a depth of water in the harbour of 34 feet
11 3 inches, 35 feet. There is no such thing as a guaranteed
12 35. It is an advertised 35.

13 Q Do you advertise in any way when the water
14 level is below 35 feet?

15 A. Oh, yes, it is indicated in the daily
16 bulletin, twice daily bulletin, issued by the signal
17 service, and it is also broadcast.

18 Q. By whom?

19 A. By the Department of Transport radio-shore
20 stations.

21 Q. Did you do any dredging in the vicinity of
22 Quebec, or below Orleans Island, or in the Saguenay, St.
23 Fulgences?

24 A. Taking St. Fulgences first, now we didn't.
25 We did some maintenance dredging there, but no capital,
26 though a channel was originally dug by the Department
27 of Public Works in the late 20's, and transferred to the
28 Ship Channel service in 1929, but since then we have only
29 done maintenance dredging. It was dug to 20 feet originally.
30 Now we have restored the 20 foot depth half way, therefore



English

1 from St. Fulgences to Chicoutimi the remainder 16 feet.

2 Q As regards to maintenance dredging, would you
3 summarize for the Commission what you do by way of
4 maintenance dredging?

5 A Yes, we make a general examination of the
6 channel in the early part of the season, general sweeping,
7 where there are indications of fill we make a detailed
8 sweeping survey to determine the approximate volume
9 deposited, and to find out, of course, where it is
10 deposited. Then we advertise for dredging tenders, and
11 put the dredgers on.

12 Q You mentioned two types of sweeping I
13 believe?

14 A Well, yes, in this case the initial
15 sweeping in the spring is what we refer to as running
16 long lines.

17 Q How do you do that?

18 A. We don't have time to travel the full
19 width of the channel in the very short period, so we run
20 a line at the advertised depth down the centre line of
21 the channel

22 Q Excuse me. Right from the start?

23 A Yes, in the various districts. We have
24 four survey vessels operating, each one in its own District,
25 and when the time permits -- there is other work to be
26 done too -- when the time permits the sweeping units run
27 these lines, one on the centre line, one on each side, and
28 one near each bank, and that is to determine whether or
29 not there are any major obstructions in the channel.

30 Q Now, you said run a line. Would you



gish 1 describe what is running a line?

2 A Yes. We have two types of survey units.

3 One a sweep scow, or a sounding scow is a good word too,
4 under which is suspended a boom about 40 feet long.

5 Q. Is it horizontal?

6 A. It is suspended horizontally at right
7 angles to track of the ship, so that we cover a width
8 of 40 feet in each sweep. This boom is suspended at the
9 advertised depth plus whatever happens to be gauge reading
10 above.

11 Q To take into account tide effects?

12 A. Yes. Supposing in the upper part of the
13 river we actually have 36 feet, a foot above 35, we sweep
14 at 36, and in the tidal sections we have to vary the depth
15 at all times in order to conform to the reading of the gauge.

16 This boom is suspended and guyed with wires fore
17 and aft, so that the boom doesn't move horizontally when
18 it strikes an object, but rises, and the amount of rise is
19 noted on gauges at each end, that is, on the port and
20 starboard side of the scow.

21 Two of our survey ships have all this equipment
22 on the ship itself. So that there is only one unit instead
23 of a scow and a pushing vessel.

24 Q. So you run lines of soundings each
25 spring?

26 A. Oh, yes.

27 Q. For the whole length of the river?

28 A. Yes.

29 Q. If you found any obstruction you run a
30 sweep?



English

1 A. Yes, and we run a detailed survey, so that
2 our lines overlap so that we don't miss anything, in order
3 to determine the extent and the maximum height of the
4 obstruction.

5 Q. Do you do that before any ships come up
6 river?

7 A No, that is not possible because the ships
8 come in even before the channel is considered open. We
9 do that as soon as the ice is out of the river because
10 with flowing ice it is impossible to run these lines,
11 because the ice would cut the wires, and all such
12 difficulties.

13 Q. How long does it take you to run these
14 lines?

15 A The initial survey takes oh, the first
16 two or three weeks of the season, but we are continually
17 sweeping all season.

18 Q. I'm limiting myself to the preliminary
19 survey?

20 A In the first two or three weeks usually,
21 that is at the time when the water is comparatively high,
22 we want to determine the position of any obstructions
23 before the water is low, so as to protect shipping.

24 Q. And a detailed survey. How long would
25 it take you?

26 A Well, it takes about a day to sweep a mile
27 of channel full width, at least a day. Now the channel
28 is so wide it is very often two days depending on the tidal
29 conditions.

30 Q. When you discover any changes in the depth



English 1 of water do you advertise this information in any way?

2 A. If the obstruction is such as to be above
3 the advertised depth, if in an area we find that there is
4 less than 35 feet at low water stage, we advertise.

5 Q. To whom?

6 A. We send a notice to pilots which is
7 published in a bulletin issued by the signal service.

8 Q. Would you have brought an example of such
9 notice with you?

10 A. I am afraid I haven't got one here.

11 Q. Perhaps later on you might bring an example?

12 A. I will bring one, yes.

13 Q. And this notice is prepared in your office?

14 A. Yes.

15 Q. And is sent to whom?

16 A. If it was the case of an emergency, if we
17 regarded it as an emergency it is telephoned in either by
18 our office of the District Engineer in whose area the
19 obstruction is found. He telephones it in to the nearest
20 signal service, and the advice is later confirmed by letter,
21 which is mailed the same day.

22 Q. Do you see that this advice is broadcast
23 on the air?

24 A. Yes, if it is of a nature which we consider
25 of very great importance to shipping, we certainly ask them
26 to broadcast it.

27 Q. Have you had any complaints from anyone as
28 regards the lateness at which these notices might be
29 advertised or again failure to broadcast the available
30 information?



English

1 A Well, we had one recently which was a
2 notice in reverse you might say. When we sweep any
3 certain area we ask the signal service to have a broadcast
4 so that pilots will know we are sweeping. We have a scow
5 prepared in front of our survey vessel. It is quite
6 difficult sometimes to keep everything together if a ship
7 goes by very fast. On this occasion there was a slip up
8 somewhere or other, and the pilots weren't notified and
9 we were the sufferers. I mean, that is the sort of thing
10 that sometimes happens.

11 Q. But the reverse didn't take place? A
12 complaint from a group of pilots, or from ship owners
13 for that matter?

14 A. Well, I think complaints have come in.
15 May I just enlarge on this?

16 Q. Yes, surely?

17 A. In the case of dredging contractors we
18 give them very strict instructions to follow the rules,
19 but sometimes in their ambition to get work done they move
20 a dredge or perhaps move a buoy out of position without
21 letting anyone know, and naturally we get complaints from
22 the pilots, and they are certainly justified in complaining
23 in this case. But we have tried to educate our dredging
24 contractors to comply with all the regulations, and things
25 are improving.

26 Q. This is not exactly what I had in mind.
27 Say if in the channel at any particular place you would
28 discover 30 feet of water you would broadcast this infor-
29 mation?

30 A. Yes.



sh

1 Q. Of course this takes a certain lapse of
2 time. Have you ever received any complaints in that you
3 were too slow in advertising information or that you
4 failed to advertise information?

5 A. No, I don't recall any, and I don't think
6 we have any on record in our files.

7 Q. After you have completed your first
8 survey do you advertise the fact that you have done so,
9 and that the channel depth is at 35 feet as stated?

10 A. No, we haven't been doing that. We have
11 only issued notices if there are any particular obstructions.

12 Q. So, if there are no notices it is presumed
13 that normal depth is available?

14 A. Yes.

15 Q. Have you been able to determine whether
16 there is a pattern in the sedimentation which takes place
17 in the St. Lawrence?

18 A. Yes, in the area below Quebec there is
19 definite pattern, variable of course. Down there we
20 initially dredged a channel through a very extent shoal
21 area, a natural shoal.

22 Q. Which channel?

23 A. That was the north channel below St. John
24 Island of the Orleans down to Brule Channel. The down
25 stream end of that was dredged through quite deep deposits
26 of sand, natural shoals. Well, the tendency in an area
27 like that is for the shoal to assume its original position,
28 and especially we do have sand coming in every year in
29 those areas, but it depends, the amount and the rate of
30 filling depends a great deal on the wind conditions, when



English 1 the water is very trubulant because of being stirred up
2 by the wind. More sand is transported than there is
3 during calm weather.

4 We made some studies down there, and we have
5 found that a great deal of sand is brought in by the
6 tributary rivers north of the Ile of Orleans, Ste. Anne
7 and various others, but most of it we find can be trans-
8 ported up stream with the high tide from the adjoining
9 shoals, which are still there, of course.

10 Q. Is that the only place in the river where
11 you have discerned a pattern?

12 A. No, we have found in recent years that we
13 have a very difficult problem at Cap Gribane.

14 Q. Where is that?

15 A. It is below Cap Tourmente. There is
16 Cap Tourmente, Cap Rouge and Cap Gribane. We have a shoal
17 in there which is filling at a fairly alarming rate. In
18 fact, we have tenders opening next Thursday for the
19 dredging of this maintenance area. We found that in
20 spite of 30 feet advertised for a long time there we only
21 had 25.

22 Q. Would that silting have taken place since
23 last year?

24 A. A lot of it.

25 Q. A lot of it since last year?

26 A. Yes. We dredged two years ago to 35 feet.

27 Q. And there is now 25 feet?

28 A. Yes. Those are the maximum of course. They
29 are very small areas, high locks, but we have to take the
30 least depth as the governing factor for the area.



English

1 Q. Are these the only places where you were
2 able to discern patterns?

3 A. No. Up river between Three Rivers and
4 Batiscan for many years we had an average depositing of
5 about 35 thousand cubic yards per year in that area.

6 Q. In inches in the bottom what does that
7 represent?

8 A. It came up to three, four feet and some-
9 times higher above the advertised depth, but most of it
10 near the bank lines, so that a ship going down the centre
11 of the channel would not likely run into difficulty,
12 although at times there have been spots near the centre
13 line too. But these lumps as you might call them, of
14 sand move during the season. They are not only deposited
15 but they is a sort of what we call siltation of sand
16 which keeps moving with the current. It is a difficult
17 thing to follow. We have to sweep and re-sweep it. If
18 there is a considerable period of time elapsed between
19 the letting of a contract and the start of the dredging
20 we re-sweep in order to locate the sand.

21 Q. You have to find the sand again, in other
22 words?

23 A. Yes, but in recent years we have found that
24 there is very little deposited in those areas, and that
25 corresponds with the low supplies of water we have had.
26 The spring freshets are lower, so that there is less
27 erosion of the tributary streams, and less sand is trans-
28 ported by the rivers. They transport far less sand during
29 a period of low water supply. So we have very little
30 maintenance required in this particular area.



English 1 Q. Nature has a way of looking after ships.
2 When it does not provide water it does not provide silting,
3 and when it provides silting it provides water?
4 A. There is an equalization there of some kind.
5 Q. What about the rest of the river up to
6 Montreal?
7 A. In the Cap Sante area, this is also a reach
8 where we have shoals, and the tide causes a reverse current
9 there, so we have had some siltation there in the Cap Sante
10 Channel.
11 Q. The principle which you have outlined,
12 that the shoal always tends to find its original shape
13 again, is that true everywhere?
14 A. It is unless corrective works are installed,
15 for instance retaining and diversion walls which would be
16 a very expensive operation. You could put in diversion
17 walls, or ramparts, or works of that nature, to keep the
18 currents from bringing the sand back into the river. We
19 have studied that. We have had experts make reports on it,
20 but the figures involved are rather astronomical, and it
21 has been considered cheaper to go ahead and dredge.
22 Q. And above Cap Sante?
23 A. Above Cap Sante we have already touched
24 on the principal area of fill, between Three Rivers and
25 Batiscau. On Lake St. Peter we have had very little filling.
26 At number two curve we removed some sand, quite coarse sand
27 some years ago, in very small quantities.
28 The only other operation in connection with the
29 maintenance there was the dredging of a bank at Slip Bank
30 as we call it. The banks are quite steep, and this had



English 1 eroded and slipped down into the channel at the Yamachicke
2 Bend. That is the only place on Lake St. Peter where we
3 have encountered anything like that, and it wasn't very
4 serious.

5 Above Lake St. Peter, between Lake St. Peter
6 and Montreal there has been very little siltation, because
7 the St. Lawrence River doesn't carry very much matter in
8 suspension, because of the Great Lakes. It seems settled
9 in the Great Lakes, and the St. Lawrence, for a large
10 river, is very, very clean, from that point of view.

11 There is some filling in Montreal harbour
12 at the upper end in the still water basin. We removed
13 a considerable quantity there a few years ago. This is
14 chiefly due, I believe, to refuse and discharge from
15 sewers, and that kind of thing, and perhaps ships.

16 Q. Can you tell the Commission what this
17 siltation would represent in depth of water, the number
18 of feet, or inches of silting which would take place?

19 A. It would vary so much that one might find
20 an area here with a depth of three feet. Then it would
21 be naturally deep water for 50 or 100 feet, and then
22 another lump of sand. There is no uniform filling of the
23 channel. It is all in small areas.

24 Q. And they have to be discovered?

25 A. By the sweeping, oh, yes, it could be
26 discovered by echo-sounding, but one would have to run
27 the echo-sounding lines at very close intervals to get
28 an accurate determination.

29 Q. Have you studied the problem of erosion
30 caused by passing vessels in the channel?



English

1 A. No, we haven't actually studied that.

2 In the St. Lawrence River there is a division of responsi-
3 bility in that respect. The Department of Public Works
4 have been studying erosion, and they have made a certain
5 collective work in the river to protect the bank lines.

6 Q. Yes, so we have heard from Mr. Bessette
7 this morning, but as regards to the channel would erosion
8 take place?

9 A. Well, in the channel, yes. We are studying
10 that too in connection with our hydraulic survey. We have
11 certain sections which we follow by running lines of
12 soundings across them every few weeks or so to determine
13 the erosion, if any, and the rate of erosion.

14 We have certain sections which we consider
15 quite critical, in the soft material for instance, and
16 where the current velocity is quite rapid.

17 Q. Could you indicate these sections?

18 A. There is one at the head of Lake St. Peter.
19 We straightened the channel there a few years ago. We ran
20 a straight line through an island, Boat Island. We removed
21 seven million cubic yards of clay and sand. It improved
22 navigation because it eliminated three curves which were
23 quite sharp, but it also has increased the current to a
24 certain extent, because there is a little faster run off
25 there now. We haven't found any alarming erosion in
26 there, but we are keeping a very close eye on it.

27 Q. What would be the effect of the erosion?
28 Would it be to eat away the side of the bank?

29 A. Yes, and probably to transport the material
30 further down stream, where we would have to dig it out



English 1 again. But we find no indication of any transport of
2 material, because the areas down stream don't seem to be
3 filling up.

4 Q. You mentioned that you have carried out
5 surveys of currents --

6 THE CHAIRMAN: If you will be a little while
7 longer, Mr. Jacques, we will adjourn now and resume at
8 2:30.

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15 ---At 1:00 p.m. the hearing was adjourned until 2:30 p.m.
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1 ---On commencing at 2:30 p.m.

2

3 THE CHAIRMAN: Gentlemen, as this day is
4 really exceptional, we are going to make an exception this
5 afternoon. This afternoon, if you wish, you may take off
6 your jackets. Insofar as the rest of the sitting is
7 concerned, we are going to find out every day if we need
8 to take off our jackets or not.

9 MR. JACQUES: On behalf of all those present,
10 my lord, I thank you very much.

11 Mr. Land, please.

12

13 H. L. LAND (Recalled):

14

15 DIRECT EXAMINATION BY MR. JACQUES (Continued):

16

17 Q. Mr. Land, I believe that at the adjourn-
18 ment we started talking about the surveys on current
19 which you have made?

20 A. Yes.

21 Q. Have you made some surveys?

22 A. Yes, we have. We started in 1961.

23 Q. Yes.

24 A. And we have been carrying on every since.
25 One of the projects which we completed as a result of
26 our surveys was the construction of a scale model of the
27 river between Montreal and Lake St. Peter, on which we
28 have been putting several proposals and projects to
29 improve the water levels, the depths, and we have tried
30 out several other projects for improving the channels in



1 the various places and in Montreal Harbour.

2 Q. And all that in connection with that
3 survey?

4 A. Yes.

5 Q. You mentioned something which intrigues
6 me. You said improving water levels.

7 A. Yes.

8 Q. How would you achieve that?

9 A. We haven't come to any firm conclusions.
10 I did mention, in connection with another subject, that
11 we had five submerged weirs, or loose stone dams, in the
12 Sorel Islands. One thing we studied was the possible
13 improvement of those weirs to raise the level to a
14 point where we could get a little more benefit from them.
15 We have to balance that with the possible erosive effects
16 of the water if it comes up to the level of the
17 surrounding land. There is a limit beyond which we
18 cannot go.

19 Another way of improving levels is the study of
20 projects where we might close off certain other channels
21 and thus increase the flow or the level in the main
22 channel.

23 Q. But wouldn't that result in a faster
24 flow at the centre of the channel?

25 A. Yes, it will. For that reason we
26 haven't yet decided by what method we are going to improve
27 levels, because it will be expected to increase the
28 velocities, to a certain extent; but we are now studying
29 the erosion patterns as well in order not to exceed the
30 limit of velocity which might become dangerous to navigation.



English 1 Q. In elaborating these plans, was any
2 thought given to the movements of ships and their safety?

3 A. Yes. That has always been kept in mind.
4 We have a plan on the widths and the current velocities
5 and the pattern of currents, so that there is not an
6 eddy set up that might cause a ship to veer from the
7 course. Those all have to be studied in conjunction with
8 the hydraulic surveys.

9 Q. Now, have you, as regards the currents,
10 found any data which has been published?

11 A. There is a great deal.

12 Q. On velocity of currents in St. Lawrence
13 River?

14 A. There hasn't been much published in
15 the area which we are involved in below Montreal. There
16 have been surveys. In 1915 a Water Levels Commission
17 was set up and they studied water levels in the St.
18 Lawrence River for a matter of three years or so. In
19 their report they recommended, among other things, these
20 weirs, which were eventually built in the Sorel Islands.
21 They also made certain other recommendations which
22 weren't considered practical at the time.

23 Q. But as regards currents, is the
24 information which you have obtained, either through your
25 scale model or actual measurement, accurate and corresponds
26 to the information which is given on charts and other
27 publications?

28 A. Yes. I would say there is pretty close
29 conformity there. On the charts the currents are shown
30 just here and there, of course, and just the general



lish

1 trend in direction and velocity; whereas, our surveys
2 are more particular and more detailed. But, in general,
3 there is not any departure from what is shown on the
4 charts.

5 Q. What is shown on the charts?

6 A. Yes.

7 Q Has your survey revealed any dangerous
8 current or any current which you would consider dangerous
9 to shipping and which is not shown on the charts?

10 A. No, not in general. But, I tell you,
11 we did discover a strange current pattern in the vicinity
12 of Victoria Basin, just below Victoria Basin. For a
13 time there seemed to be a, shall I say, more divergent
14 pattern there than is shown on the charts, but that
15 seemed to correct itself. We had a later survey and at
16 the present time the current pattern in there is very
17 close to that shown on the charts.

18 Q. Would you know what caused this?

19 A. We were trying to find out what did
20 cause that, but I do not think that we have solved the
21 matter yet. We have made surveys there quite recently
22 and there doesn't seem to be anything unusual there now.

23 Q. Have you found any other instances like
24 that elsewhere in the channel?

25 A. No, not to my knowledge.

26 Q. So, based on your experience and your
27 work, you would say that the currents, as shown on the
28 charts, conform to the findings of your survey?

29 A. Pretty well, although the charts, the
30 information on the charts is limited. It has to be,



sh

1 because there isn't room for all the details.

2 Q. Of course. Have you, in the course of
3 your work, ever consulted the current tables prepared
4 for the Atlantic Coast and the volumes entitled "Sailing
5 Trips" or "St. Lawrence River Pilot"?

6 A. Yes, we have. We do not have too much
7 reason to study those very deeply, excepting below
8 Quebec, because that applies chiefly in the areas down-
9 stream from Quebec. But we have taken current measure-
10 ments of our own, in connection with our tidal surveys,
11 in the area I referred to this morning, at the lower end
12 of the Anse Baleines and I think our information is of a
13 more detailed nature. It is very close to what is
14 indicated on the charts of the current.

15 Q. Do you pass on the results of those
16 surveys to anyone, and if so, to whom?

17 A. No. That is kept for our own purpose,
18 because it is used in connection with the studies which
19 are not yet completed in many cases .

20 Q. So you would not release that informa-
21 tion?

22 A. No. If anyone inquired, for any
23 particular area, I do not think there would be any objec-
24 tion to releasing it.

25 Q. Have you ever received a request from
26 either shipowners or pilots for information as regards
27 the channel?

28 A. Oh, yes. In many cases --- in some
29 cases, there have been reported touchings and we have
30 swept the areas and found them clear, usually. If there



English 1 is anything we discover, we have reported it to them.

2 Q. You said that touchings were reported
3 and that you swept and that the area was found clear?

4 A. Yes.

5 Q. Would that imply that the depth of
6 water available at the time of touching was that shown on
7 the chart?

8 A. Oh, yes. The channel was the depth as
9 indicated on the chart, but there might have been a
10 slight error in placing a ship. I mean to say, a
11 navigator might have thought he was in the channel when
12 he was actually fairly close to the bank.

13 Q. Fairly close to the bank?

14 A. Yes.

15 Q. Do you have anything to do with the
16 laying down of buoys along the channel?

17 A. In the Sorel District we assist the
18 District Marine Agent by putting two of our engineers on
19 each of the two vessels placing the buoys in the Spring.

20 Q. What is the function of those two
21 engineers?

22 A. They take sextant angles in order to
23 locate the buoys as nearly as possible in the advertised
24 position.

25 Q. Are they entrusted with the responsibility
26 to see that they buoy is laid in the proper position?

27 A. No. Our function is only to assist the
28 master of the vessel to place them in the proper position;
29 but as I understand it, the responsibility is that of
30 the Aids to Navigation ...



English

1

Q. The Department of Transport?

2

A. The Department of Transport.

3

Q. Since the subject matter may be brought up, would you sum up for the Commission the plans for improvements of the St. Lawrence Ship Channel which are being currently worked on?

7

A. Yes. At the present, we are widening an area which includes Cap a la Roche curve and Cap Charles Channel from about 30 miles downstream from Three Rivers.

10

Q. Is that the same widening you mentioned this morning?

12

A. Yes. That widening is underway now, partly completed. It will be completed next year.

14

Q. But apart from what you mentioned this morning...?

16

A. Yes. This is part of what remains to be done.

18

Q. Remains to be done?

19

A. To be done, yes. This is a three-year contract which started last year and is supposed to be finished at the end of next year.

22

Q. Where is Cap a la Roche exactly?

23

A. It starts --- the upper end of the curve starts near Cap Levrard. If you find Batiscau and go downstream for five or six miles, you come to Cap Levrard.

27

Q. Just at the St. Jean Deschaillons?

28

A. That is correct. And the area which is being improved now extends from Cap Levrard to Cap Charles, just above Grondines. From Cap Charles down to

30



lish

1 Quebec, the channel is 800 feet minimum.

2 Q. What is the purpose in making those
3 improvements?

4 A. That to assure shipping that the channel
5 in that particular area is wide enough to take care of
6 any possible incidents that might happen whereby a ship
7 would lose steering control and be forced to turn around ---
8 some of the ships are over 700 feet long ---- in an area
9 where the banks are high and rocky, and the channel is
10 over 550 feet wide. A ship of a length of over 700
11 feet would probably have difficulty swinging around and
12 it might block the channel and stop navigation.

13 Q. In that respect, have you received any
14 representations from shipowners?

15 A. I just can't put my finger on anything
16 just now, as it were, but there have been certain
17 discussions and verbal remarks on this matter for many
18 years.

19 Q. When you plan any improvements to the
20 channel, do you consult the pilots?

21 A. Yes. We do consult the pilots quite
22 frequently.

23 Q. How do you proceed to consult them?

24 A. To get in touch with the pilots, we
25 normally contact the Regional Superintendent of Pilots
26 in Montreal and arrange a meeting.

27 Q. Yes.

28 A. A lot of these improvements have been
29 planned for a long time and we haven't just been going
30 to the pilots for every move in this connection, as it



English 1 were, but in planning we have had consultations with
2 pilots. The improvements are usually planned from a
3 report by a special committee, a Ship Channel Committee,
4 which has a membership of senior officers from the
5 Department and related bodies like the Seaway and the
6 National Harbours Board.

7 Q. And would anybody else be included on
8 this committee, such as representatives from shipowners
9 or representatives from pilots?

10 A. No. There haven't been any representa-
11 tives from pilots and shipowners.

12 Q. You mentioned consultation of pilots
13 and you referred to the Regional Supervisor. Were your
14 consultations limited to an exchange of correspondence
15 and opinion with the Regional Supervisors, or did you
16 actually meet with the pilots?

17 A. Well, we have met with the pilots, the
18 representatives of the pilots, the president of the
19 Association and the secretary and so forth, and we have
20 very often had troubles arising from certain operations
21 in the river, dredging service for the bridge at Three
22 Rivers, for instance, and things of that nature.

23 Q. I was just coming to the bridge in
24 Three Rivers.

25 A. I anticipated.

26 Q. No, you did not anticipate. But this
27 brings us to the subject of obstructions in the channel.
28 Do you have anything to do with the obstructions in the
29 channel?

30 A. The obstructions, if they relate to



1 dredging, they are certainly our responsibility. But any
2 wreckage, any ship that is wrecked or anything of that
3 nature, the District Marine Agent is the official.

4 Q. You have nothing to do with that?

5 A. No, except that we cooperate with him
6 in helping to remove it, to spot it, to locate it. I
7 can give you one example. The dredging contractors in
8 Deschaillons, the area I referred to recently, sank a
9 barge in the middle of the channel. Well, it was up to
10 us to see that the contractor got it out of there as
11 soon as possible, but the first man we advised was the
12 Agent in Sorel in order to place the necessary buoys
13 to mark the area and all that. So, there is a very
14 close cooperation and working together on any matter of
15 wreckage.

16 Q. That reminds me of another question.
17 When you make improvements to the channel, you mentioned
18 that at the head of Lake St. Peter you eliminated two
19 or three curves in the channel?

20 A. Yes.

21 Q. Is it your practice to do so elsewhere
22 when you make improvements?

23 A. Yes, as far as it is possible. If we
24 cannot eliminate the curve, we plan the widening so as
25 to flatten the curve.

26 Q. I see.

27 A. Picture a curve. We cut off the inside
28 of it in order to straighten the course.

29 Q. Now, the bridge at Three Rivers, under
30 whose responsibility is it? These soundings or these



1 surveys which are carried out...?

2 A. Those surveys are made for the Bridge
3 Commission --- whatever the body is called --- which is
4 responsible for the planning of the bridge structure.
5 That is a provincial matter.

6 Q. You have nothing to do with that at all?

7 A. Not that particular operation, but we
8 are interested in obstructions which might be put in by
9 the surveyors who are sounding and boring for the two
10 piers.

11 Q. Have you studied that project from the
12 point of view of the movements of ships, the bridge
13 which they are planning to build? I understand that this
14 construction will restrict movements of ships in that
15 area and that it will narrow the channel further still?

16 A. This has been discussed with the
17 Department, and we are getting very close to departmental
18 policy here and I do not think I can say too much in this
19 respect, because it has been a matter of discussion
20 between the Minister and the provincial government.

21 MR. JACQUES: Thank you. Your witness.

22

23 CROSS-EXAMINATION BY MR. LALONDE:

24

25 Q. Mr. Land, would it be appropriate to
26 ask you questions about Ste. Helens, the site for the
27 World's Fair?

28 A. It is quite appropriate to ask questions,
29 but this is another matter which is being studied and
30 official announcements, I think, are to be made very soon,



English 1 from what I read in the papers.

2 Q. When you are recalled for the Commission,
3 we might be able to ask you questions about what effect
4 this might have on navigation.

5 A. Any project or any works on the River
6 does affect the regime or the behaviour of the River, no
7 matter what it is. But there is just a matter of degree,
8 how much it will affect it and how many compensating
9 works can be put in to counteract the effect.

10 Q. Do you know what span there is between
11 the two main piers across the channel of the Three
12 Rivers bridge --- what room would it leave for the
13 passage of ships?

14 A. I haven't seen the final plan. I under-
15 stand it is a one-thousand foot centre span.

16 Q. Would this have any affect --- would
17 this bridge have any effect on anchoring?

18 A. Well, it will restrict the area for
19 manoeuvring the ship, certainly.

20 Q. You mentioned that you do broadcast any
21 findings on obstructions in the channel or, again, any
22 sedimentation. For how long do you broadcast these
23 findings?

24 A. Well, they are broadcast for a day or so,
25 until the published notice has been brought to the
26 attention of all shipping. There is no delay or
27 interval wherein no one knows what is happening.

28 Q. No. But you do not carry on broadcasting
29 then?

30 A. No.



English

1 Q. Once it is published, it is presumed
2 that it has been brought to the knowledge of all parties?

3 A. Yes, exactly.

4 Q. You also referred this morning to some
5 difference in the depth of water at a place called Longue
6 Pointe --- or is it Cap ... ?

7 A. Cap Gribane.

8 Q. Cap Gribane?

9 A. Also called Longue Pointe, yes.

10 Q. Was this brought to your attention by
11 individual parties?

12 A. It was brought to my attention by our
13 District Engineer in Quebec, Mr. Morin, of our division.

14 Q. Do you know where he got his information?

15 A. He swept the area and he found the
16 obstructions higher than they were the previous year and
17 issued a notice.

18 Q. Is it not a fact that pilots complained
19 to your department, your division, that there was only
20 roughly 25 feet of water instead of 30 feet at that
21 place?

22 A. I do not seem to have anything on record
23 about that. I know there have been various complaints
24 about there not being enough water there at all times.

25 Q. . And for how long had this place been
26 dredged before?

27 A. Two years. It was dredged in 1961 to
28 35 feet.

29 Q. To 35 feet?

30 A. Yes.



English 1

Q. And two years later it was back to 25?

2

A. 25. Only in very small areas, of course.

3

Q. But I suppose this would be enough to ...

4

A. Yes. The lowest depth would be the

5

governing factor for the whole stretch.

6

Q. That would be enough to cause damage to

7

a ship even if it is a small area?

8

A. If a ship were off her course, she might

9

run into trouble, but it is very soft material.

10

Q. You mentioned also, I think, that you

11

haven't been dredging the south channel for some time

12

below Quebec?

13

A. No. The last dredging in there was in

14

1936.

15

Q. Is there any particular reason why this

16

dredging has not been carried on?

17

A. Well, that is a matter of --- I just

18

can't give you a firm answer there. But as I recall it

19

at that time there was pressure to put all the traffic

20

in the North Channel and in order to reduce the cost of

21

the maintenance, it was decided just to let the South

22

Channel go and concentrate on the North.

23

24

25

26

27

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30



1 Q. Do you know what depth this channel would
2 be?

3 A. Well, at the present time it would be
4 very limited at Bale, which is the point
5 where most of the filling occurs. We have not any late
6 soundings. I don't know whether it has been sounded for
7 the last ten years or not, but there certainly would not
8 be much more than 18 feet at low water now in the nearest
9 estimation I can make.

10 Q. Isn't it a fact that ships still use that
11 channel?

12 A. I believe they do, yes, particularly
13 the older pilots, who know the course very well.

14 Q. Yes, but isn't it a fact also that you
15 have ships that will use that channel to go to some of
16 the harbours on the south shore?

17 A. This is quite possible. I have not any
18 record of the ships using it. The Signal Service pro-
19 bably would have record of the number of ships piloted.

20 Q. Isn't it a fact also that you have
21 received representations from the pilots, if not for the
22 dredging of the south channel, at least in order to
23 obtain soundings of that channel?

24 A. I don't know of any request that has come
25 to my office. If it has come to headquarters --- I
26 haven't had anything in writing on it at all. No.

27 Q. And you have checked your records in that
28 respect? You don't have anything in your records?

29 A. No, I haven't found anything, maybe
30 years back there may have been something, but I certainly



1 don't recall anything recently. I may be mistaken, but
2 that is to the best of my knowledge.

3 Q. All right, I will check myself and pro-
4 duce any correspondence there is.

5 Would it be possible to provide shipping and
6 the pilots with soundings in that area, the south channel?

7 A. Yes, certainly. The areas where soundings
8 are mostly required are the South Bank, which I
9 referred to, and the stretch upstream from there, it
10 would require a fairly extensive survey, but it could be
11 done.

12 Q. But is this still a matter of cost or
13 policy?

14 A. I think policy mainly. It would have to
15 be brought to the attention of the Department, I am quite
16 sure, and if it were policy to make the survey we would
17 be prepared to do so.

18 Q. Certainly this is low cost comparatively
19 to dredging the channel?

20 A. Yes.

21 Q. You also referred to some work you did in
22 the Chicoutimi channel?

23 A. Yes.

24 Q. How deep is the channel in that area?

25 A. Well, from the deep water at the point
26 just below St. Jean into an oil anchorage opposite Pointe
27 Ilet, between, just a mile or so below Pointe Ilet,
28 we had 20 feet at low water normal tides, and from that
29 point to Chicoutimi we can only guarantee, at least we
30 can only advertise 16 feet.



1 Q. How wide is the channel?

2 A. The minimum width is 250 feet, with
3 approximately 500 feet on the curves.

4 Q. Do you have several curves in that area?

5 A. Yes, there are, counting from seaward,
6 five before you get into Chicoutimi.

7 Q. How long is the channel?

8 A. 9 miles approximately from Chicoutimi
9 to deep water.

10 Q. Do you have anything to do with anchoring
11 buoys in that channel, or is that navigational aids?

12 A. That is a matter for the aids to naviga-
13 tion.

14 Q. Have you done any dredging in the
15 Chicoutimi channel during the last five years?

16 A. Yes, we did this deepening work last year
17 and the year before. That is the only dredging we have
18 done there.

19 Q. Is it your plan to bring the channel to
20 20 feet eventually?

21 A. That is just a matter of the demand,
22 whether there is enough, well, if the requirements of
23 shipping are such that there are enough requests to the
24 Department that probably will be deepened to Chicoutimi.

25 Q. Are you aware of the fact that several
26 ships drawing more than 16 feet are using this channel
27 at the present time?

28 A. Oh, yes, certainly. They come in with
29 the tide.

30 Q. You referred to currents on the St.



1 Lawrence River. Do you have any idea as to the velocity
2 of currents in various areas on the river?

3 A. Yes, the maximum velocity in the upper
4 part of the river is between St. Mary's current and the
5 --- well, it is really St. Mary's current, under the
6 Jacques Cartier bridge, and up to a point opposite the
7 clock tower on Victoria pier. That is about 5 knots,
8 possibly slightly more during the spring freshet, when
9 you have deep water periods.

10 Q. How high could it go?

11 A. In the channel itself between 5-1/2 and
12 6, probably not quite 6.

13 Q. Do you know of other areas which have
14 pretty strong currents?

15 A. Yes. The Cap de la Roche curve at full
16 falling tide would have just about equal velocity.
17 Then there is Richelieu Rapids where the current is very
18 close to 6 knots at full fall tide, at spring tide.

19 Q. Have you made any measurement lately of
20 these currents?

21 A. We have in the Montreal upper harbour,
22 yes.

23 Q; But in the Richelieu Rapids?

24 A. No.

25 Q. You have not?

26 A. No.

27 Q. How far back do your measurements go?

28 A. We have not made any measurements of our
29 own there. They were just the ones that were on the
30 chart. We intend to expand our hydraulic work to take



1 in the whole river to Quebec eventually.

2 Q. So the information you are giving me is
3 taken, I mean, it is not information which comes from
4 your own observation?

5 A. No, the first one, the information has
6 been corroborated by our own findings.

7 Q. But the other information?

8 A. That is just from the chart.

9 Q. And it would not be the responsibility
10 of your Division?

11 A. No.

12 Q. You wouldn't know about currents elsewhere,
13 further down in the river, out of technical measurements
14 made by your Division, would you?

15 A. No. We have made current measurements
16 at various points, taken meterings, and also surface
17 current measurements on the Orleans section. I did a
18 considerable amount of that myself a number of years ago,
19 and also in the area we refer to at Sorel, where we
20 straightened the channel through the Islands.

21 Q. Would these be areas where there would
22 be comparatively strong currents?

23 A. Average currents, about from 3 to 4 knots.

24 Q. You have not carried out any measurements
25 at the Quebec bridge for instance?

26 A. No, we haven't. The National Research
27 Council made some measurements there a few years ago,
28 using our equipment, for the specific purpose of deter-
29 mining whether or not there was any stratification due
30 to salt water intrusion.



1 Q. The entrance of the Saguenay, have you
2 every made any surveys?

3 A. Only in connection with the location of
4 what is now the lighthouse there. Other divisions in
5 our Department usually asked our assistance in any
6 surveys referring to the White Island area and the mouth
7 of the Saguenay, but that is not specifically for
8 navigation. It is for the planning of the placing of
9 the lights there.

10 Q. Was there any current at the spot where
11 you put this light?

12 A. Oh, yes, a considerable current, and
13 quite a variation, depending on the state of the tide.

14 Q. Do you recall any specific information
15 in that regard at that place?

16 A. Well, I recall that there is a double
17 effect there, the water coming out of the Saguenay meets
18 the main flow, and causes a cross, a diagonal current
19 there, not only at falling tide and the reverse, a
20 rising tide, but on a quartering basis as it were, so
21 that navigators would have to be very careful to take
22 that into account, where you have two streams meeting.

23 Q. Did you make any measurements at that
24 place about currents?

25 A. No meterings, just surface measurements.

26 Q. Do you remember the results of your
27 measurements?

28 A. I can't rhyme them right off, no.

29 Q. Is there any difference in the currents
30 when the channel is rather straight and when you get into



1 curves? Do you have knowledge, for instance, between
2 Montreal and Quebec? Has this any effect on the current?

3 A. Yes, you do have a cross current, as they
4 call it, at curves, and also on some of these straight
5 sections, depending on whether the straight section is
6 more or less parallel to the flow, but if it is a bit
7 on the side there is quite a cross current. I mentioned
8 the St. Mary's current above the Jacques Cartier bridge.
9 Well, the strong current there is at an angle of about
10 25 degrees to the main centre line of the channel.

11 Q. In addition to this cross current which
12 you have, as you say, at curves, and also in some
13 straight sections, do you find any increase in the
14 velocity of the current in curves in comparison with
15 straight sections?

16 A. No. Usually the velocity in curves is
17 a little slower, because the cross section is wider.

18 Q. Could you measure the effects of the
19 dredging which you have been carrying out for the last
20 few years, I should say for the last decades, on the
21 velocity of the current of the river? Has this tended
22 to increase the current, or apt to decrease it, for some
23 reason?

24 A. Well, it wouldn't increase it much,
25 because it lowered the elevation in Montreal, flattened
26 the flow, so that theoretically it should be a decrease
27 in velocity, with an increase immediately above Montreal,
28 of course, in the rapids, the section between Montreal
29 and the Victoria Bridge.

30 Q. Did you carry out any measurements in that



1 respect, any scientific or technical surveys?

2 A. No, because in the old days there was
3 no continuing body set up to study the river effects.
4 I mentioned I think this morning a commission set up in
5 1915. There was another inter-Departmental board
6 in 1934, 35, and 36. Many measurements were made at
7 that time, and we have the records of those, but there
8 was no records kept between 1936 and two years ago, so
9 there is no continuing record.

10 Q. So you can't say whether the current
11 has increased or decreased due to dredging?

12 A. No, just those two points in 1915 and
13 1934 to 1936.

14 Q. Has the low water condition which has
15 prevailed in this area for some years now had any effect
16 on the current, and you mentioned this morning that we
17 were somewhat at the bottom of a cycle. As the cycle
18 goes up again is this going to have any effect at all on
19 current velocity?

20 A. Not too much. Why I mentioned the bottom
21 of a cycle, it was in the nature of a hope. I think it
22 may go even lower than it is today, but we rather
23 anticipate that it is going to rise, but with the
24 increase in flow there is always an increase in velocity.
25 when you have a bigger flow, that is deeper water,
26 just a relative increase, not a serious one. It may
27 increase, say, half a knot.

28 Q. So that this might result in an increase
29 by about half a knot?

30 A. Yes. Well, that is a variation that



1 recurs all the time. It is not something new. It will
2 recur at the same stage of the river at any time.

3 Q. Do you have anything to do with dredging
4 in the mouth of the Saguenay River?

5 A. No, there has never been any dredging
6 done there. The deep water section is quite wide, and
7 it is deep enough not to interfere with navigation at
8 any time.

9 Q. Did you carry on any dredging at Wolfe
10 Cove in the past five years?

11 A. Yes.

12 Q. That is in Quebec City?

13 A. Yes. That is a maintenance operation,
14 which is done by the National Harbours Board. We super-
15 vise it, because we have the equipment and the personnel.
16 In other words, we make the survey, determine the amount
17 to be taken out, supervise the dredging and also do the
18 final sweeping on behalf of the Harbours Board.

19 Q. Do you remember having done any in that
20 particular place over the past five years?

21 A. Oh, yes, I think we have done it well
22 within that period. We have dredged there from time to
23 time, quite a number of times.

24 Q. Is there any substantial sedimentation
25 at that place?

26 A. There is considerable, yes. I just can't
27 say how many. Every time we dredge we have a matter of
28 about a hundred thousand cubic yards, but it is not every
29 year.

30 Q. What would be the cause of sedimentation



1 at that place?

2 A. Tidal currents chiefly I would say.

3 Q. Has tidal current a strong effect on
4 sedimentation in the river?

5 A. Yes. Portneuf I would say, that is the
6 Cap Sante barrier, where you have a strong reverse
7 current there at high tide.

8 Q. I think you mentioned that your capital
9 dredging ran to a couple of million dollars a year?

10 A. About three and a half on the average.
11 \$3,500,000.00.

12 Q. And maintenance dredging of the river,
13 what would it amount to?

14 A. Anywhere between two hundred thousand and
15 five hundred thousand dollars.

16 Q. Is this paid out of general revenue?

17 A. Well, we don't have any revenue in our
18 Department. We get the appropriation, and work within
19 the limits of that appropriation. We don't have any toll
20 charges, or anything of that nature. There is no money
21 collected in our Branch, or Division.

22 Q. No charge to ships or anything of that
23 sort?

24 A. No.

25 Q. Do you have anything to do with the
26 draught of vessels going up or down the river?

27 A. No, there is no control of that from our
28 point of view. The ships leaving Montreal have to abide
29 by the rulings of the Port Warden, who is not a function-
30 ary of our Department.



1 Q. Do you have any authority in the matter
2 of draught of vessels?

3 A. None whatsoever.

4 Q. Do you have areas in the St. Lawrence
5 River, or the Chicoutimi canal, where the channel is
6 widened to 550 or 800 feet, but where you have very sharp
7 banks outside the channel, or is it generally very smooth,
8 and going shallower and shallower very slowly?

9 A. No, there are very high banks in certain
10 areas. Starting from Montreal, the banks in the Harbour
11 of Montreal aren't extremely high. Most ships can swing
12 a bit wide of the banks if necessary, but as you go down
13 stream, Becancour has very high banks on the south side,
14 and then Cap de Laurier on the north side has high banks.

15 Q. This is right along the channel?

16 A. Yes, we have come right into the island
17 there, and the channel from Cap de Laurier down to
18 Vercheres has quite high banks in certain areas. There
19 are a couple of islands on the north side, and at the
20 Vercheres curve itself we have cut another corner off
21 an island, which means, of course, that the bank is high,
22 but the places I have mentioned are chiefly soft material,
23 and from Vercheres down to Sorel the banks aren't exceed-
24 ingly high, excepting at Bellmouth curve, about 11 miles
25 upstream from Sorel, and then we get into deep water at
26 Lanaraie, naturally deep water, where there has been no
27 dredging for a number of miles there, until you get down
28 to Hay Island, where the banks aren't high.

29 The next high area is the island I referred to,
30 Boat Island, where we dredged the island itself, so



1 naturally the banks are well above the water line there.

2 Q. How wide is the channel there?

3 A. 800 feet, plus the extra channel that was
4 the main course prior to the straightening. We are not
5 attempting to maintain the old channel, but the deep water
6 is still there. Lake St. Peter has high banks. Nearly
7 all the way they are eight or nine feet high, but the
8 material is very soft, marine clay.

9 Q. You can get stuck on the bottom?

10 A. Oh, yes, quite so, but nothing to break
11 up the hull. From Lake St. Peter down to Three Rivers
12 it is deep water. Then we have certain areas between
13 there and Cap de la Roche curve which are high in spots,
14 but I would say that the area which we are now dredging
15 is by far the most critical of all, at Cap de la Roche
16 curve, where the banks aren't only high, but they are
17 practically solid rock, shale rock, and from there down
18 it is not too bad.

19 Q. Did you mention the Richelieu Rapids?

20 A. Yes. The banks are high there too, but
21 the channel is fairly wide and straight. The current is
22 straight as far as I recall. There are only the radical
23 currents set up by ships being of a direction due to tides.

24 Q. Could you explain also the situation in
25 the Chicoutimi channel in that respect?

26 A. The banks there are quite high. It is a
27 very, I would say, a dangerous channel to navigate. Ships
28 go in there. I am speaking just from my own point of view.
29 I am not a pilot, but I would be very much on my guard
30 going into Chicoutimi because of the narrowness of the



1 channel, and the shallow depths at low water, but by
2 going in on the tide and coming back on the rising tide,
3 I think a lot of danger could be avoided.

4 Q. Have you also got banks?

5 A. Oh, yes, very high banks, and a crooked
6 channel.

7 Q. Do you know the number of curves in the
8 channel between Montreal and Quebec, for instance? Have
9 you ever counted them?

10 A. Probably twenty-five or thirty.

11 Q. What about anchorages, let us say, from
12 Montreal down?

13 A. We have an anchorage at Longue Pointe in
14 the harbour, which may not be adequate for the present
15 volume of traffic, but it has been very useful. That
16 was an anchorage which was dug, dredged.

17 The next anchorage downstream is at Lanaraie,
18 where there is naturally deep water. Many of the ships
19 waiting for berths in Montreal anchor there and there is
20 quite a bit of room, and that is now within the limits
21 of the Montreal Harbour as extended a couple of years
22 ago.

23 Now, the next anchorage is one we dug on Lake
24 St. Peter.

25 Q. How many miles would that be from the
26 previous anchorage?

27 A. That would be about --- I have a mileage
28 table ---

29 Q. Approximately?

30 A. About thirty miles downstream. I have a



1 mileage table here on page 210 of our booklet on the
2 St. Lawrence River, the table of mileage, Lanaraie church
3 is 36 miles from Montreal. That is statute miles, and
4 Longue Pointe is about 5 miles. It is 30 miles, roughly
5 speaking, from the Longue Pointe anchorage down to
6 Lanaraie.

7 The next anchorage is at Yamachiche Bend, which
8 is 65 miles, another 30 miles from Montreal. That was
9 dredged some ten years ago.

10 Q. I see.

11 A. And the next one is, of course, at the
12 foot of Lake St. Peter in the Three Rivers area, an
13 anchorage already referred to in connection with the
14 proposed bridge. That is a matter of fifteen miles ---
15 ten or fifteen miles from the Yamachiche anchorage, which
16 is a natural one --- plenty of room.

17 The next one is at Batiscan, There is a certain
18 amount of anchorage space at Pointe St. which
19 is a few miles down from there and Batiscan anchorage
20 was dredged. That is 101 miles --- we are speaking of
21 statute miles --- from Montreal, which means another 35
22 miles below Yamachiche and 28 miles below Three Rivers.
23 From there on there are places where a ship can anchor
24 in an emergency, but no regular anchorages.

25 Q. I see.

26 Q. We have 60 miles, approximately, from
27 Batiscan down to Quebec where there are no anchorages as
28 such. At Grondines you can anchor, with precaution, of
29 course.

30 THE CHAIRMAN: Do you still have many questions?



1 MR. LALONDE: I have still quite a few questions,
2 my lord.

3 THE CHAIRMAN: I think, since we are going to
4 break at 4.30 this afternoon, we will take a recess now.

5
6 --- Short recess.

7
8 Q. Mr. Land, before the adjournment you had
9 explained to the Commission the number of anchorages
10 between Montreal and Quebec and I was going to ask you
11 whether this meant that a ship, if we were to take a
12 large ship, let us say, like those over seven hundred
13 feet long, going down the river, could anchor only at
14 those anchorages mentioned or could the ship anchor at
15 other places conveniently on the river, if anything would
16 require anchoring on the way?

17 A. I do not think there are very many places,
18 aside from the ones I mentioned, where it would be safe
19 to try to anchor. In an emergency, things can be done
20 but it would be risky.

21 Q. Is there any anchorage in the Chicoutimi
22 canal?

23 A. Not between the beginning of the shoal
24 until you reach Chicoutimi. There are no anchorages in
25 that stretch at all for nine miles.

26 Q. Is there any anchorage below that place?

27 A. Yes. There is a very good anchorage
28 below the entrance to the St. Fulgence Chicoutimi channel.

29 Q. This is before the entrance at St.
30 Fulgence?



1 A. Yes.

2 Q. In the Saguenay River, are you in a
3 position to testify as to whether a ship can anchor easily
4 in the river?

5 A. Well, not in the river proper. From the
6 mouth of the Saguenay up to St. Fulgence it is deep water.
7 There is Ha-Ha Bay, where many ships anchor while they
8 are waiting for berths at Bagotville; but there is
9 Anse St. Jean a little further downstream. It would be
10 used as anchorage, but I do not think there are very
11 many, apart from that.

12 Q. How far would they be from the entrance
13 of the Saguenay River to the last place you mentioned?

14 A. Ha-Ha Bay is around 75 miles from the
15 entrance and Anse St. Jean is --- I just can't place it
16 --- around 50 miles from the entrance.

17 Q. You consider that apart from those places
18 the river itself is not a place where you can anchor
19 because it is too deep?

20 A. No. It is very deep and the shores are
21 quite steep. They come right down.

22 Q. Below Quebec, are there some areas where
23 ships cannot anchor either because the current is too
24 fast or because there is too much water or for any other
25 cause or because the channel is too narrow?

26 A. Well, the channel --- a dredged channel
27 in the St. Michel Brule Bank course --- that is from St.
28 Jean downstream, is a thousand feet wide, not only to
29 the end of the course, but from there down to the end of
30 the shoal at Cap Gribane, there is fairly deep water;



1 but the channel is a thousand feet wide and most ships
2 can swing around and if they weren't so very deep draught
3 they could probably anchor safely along the bank.

4 Q. Are there places where it could be very
5 hard or difficult to anchor? For instance, I understand
6 that a certain passage at Ile aux Coudres would be pretty
7 tough in the curve north of Ile aux Coudres?

8 A. I would say it would be difficult there.
9 This area is really outside the limits of our direct
10 operations. I can only speak from having travelled it
11 many times. But from the point of view of navigation
12 I couldn't give you very sound advice on that.

13 Q. Your authority would end before Ile aux
14 Coudres, further up?

15 A. Yes, insofar as dredging is concerned.
16 We are called upon to do various survey jobs in any
17 stretch of the river, as far as Father Point; but
18 specific jobs, like making a survey of an entrance for
19 construction purposes, or something of that nature ----

20 Q. Did you make any survey as to currents
21 at the Three Rivers block?

22 A. No, we have not. We have pretty well
23 abandoned that channel, as indicated previously. There
24 hasn't been any survey there for many years.

25 Q. Do you have any information as to
26 obstructions in the channel caused by cables and oil
27 pipelines or other obstructions of the same type?

28 A. We have come across that kind of thing.
29 We do a lot of work for the National Harbours Board. We
30 supervise it. In the St. Charles River estuary in



1 Quebec, we have picked up many cables and things of that
2 nature that have apparently been dropped over board.
3 That is, we have picked them up --- the dredges operating
4 have picked them up.

5 Q. Are you referring to ship's cables?

6 A. Yes, ship's cables and tie lines.

7 Q. I am referring, rather, to telephone
8 cables, for instance, which would cross the channel. I
9 understand there are some in Quebec?

10 A. Yes, there are some in Quebec and some at
11 Three Rivers; but they are in deep areas where we do not
12 have any dredging. We have never come across them. They
13 have been snagged, I think incidentally, by ships'
14 anchors at times.

15 Q. Would this mean that they would be lying
16 on the bottom only?

17 A. Yes.

18 Q. Only lying on the bottom?

19 A. Yes.

20 Q. And these are areas where a ship can
21 anchor?

22 A. No. Usually it is in a prohibited anchor-
23 age area, but the ship could be dragged by a strong wind.
24 That has happened.

25 Q. What about oil pipelines in Montreal,
26 are they just lying at the bottom?

27 A. No. They are covered.

28 Q. They are covered?

29 A. Yes, they are covered.

30 Q. I understand you also look after the non-



1 canal part of the Seaway up to St. Regis --- is that the
2 case --- or further up?

3 A. Further up, really --- beyond Brockville,
4 the Brockville Narrows.

5 Q. And further up it comes under the Ship
6 Canal Division, Toronto?

7 A. No. The canal is mostly on the U.S.
8 side --- almost entirely on the U.S. side from there to
9 Kingston.

10 Q. How wide is the channel further up from
11 Montreal in the parts which are under your jurisdiction,
12 generally?

13 A. The Seaway, the open reaches, Lake St.
14 Louis is 450 feet. That narrows down to the canal
15 entrance, which is 225, or something of that nature. But
16 most of Lake St. Louis is 450 feet wide. Lake St.
17 Francis, there are stretches 600 feet wide, but mostly
18 450; but the Power Entities sections above Iroquois are
19 600 feet wide.

20 Q. Is this the same up to Brockville?

21 A. Yes. I understand it is all the way.

22 Q. 600?

23 A. 600 feet.

24 Q. How are the banks on the side of that
25 channel?

26 A. They are very high banks on Lake St.
27 Louis, almost up to zero datum and the centre part of
28 Lake St. Louis is fairly deep. There are areas on Lake
29 St. Francis where the channel has been cut through shoal
30 areas; but a great part of it is fairly deep on the sides.



1 There are anchorages on the side of the channel.

2 Q. How many anchorages do you have from Lake
3 St. Louis to Lake St. Francis?

4 A. Lake St. Louis, there is an anchorage
5 below Beauharnois there.

6 Q. Yes.

7 A. And there are certain areas apart from
8 that where ships can anchor, without interfering unduly
9 with navigation. In Lake St. Francis, I know there is
10 one above the entrance to the Beauharnois Canal and one
11 at the upper end, and then there is --- I am not too
12 familiar with the whole ground there, as I am from
13 Montreal down --- but there are several anchorages, some
14 of which we have enlarged after detail survey sweeping.

15 Q. And further up from Lake St. Francis, are
16 you aware of anything in the channel between St. Regis
17 and the Lock?

18 A. In that area it is entirely American.
19 The area from the end of Cornwall Island and the South
20 Channel, it is all American, up to Canada Island pretty
21 well.

22 Q. And further up from Iroquois Lock, how
23 are the banks outside the channel?

24 A. They are quite high. A great deal of
25 that was excavated in the dry, by steamshovels and blast-
26 ing. A part of it was dredged, but a great deal of it
27 was dredged in the dry.

28 Q. Dredged in the ---?

29 A. In the dry --- dry excavation with shovels
30 and trucks!



1 Q. So they would be very restricted waters?

2 A. Yes.

3 Q. Did you carry on any surveys about
4 currents above Montreal?

5 A. No. We haven't done much of that. The
6 Seaway Authority have made a current study at the lower
7 end of the American section, south of Cornwall Island,
8 in connection with the study of the effects of peaking.
9 That is the variation in flow.

10 MR. LALONDE: Thank you very much, Mr. Land.

11

12 CROSS-EXAMINATION BY MR. LANGLOIS:

13

14 Q. Mr. Land, I do not know whether this was
15 put in my short absence this afternoon but I have here
16 in front of me exhibit 487 and I read in the legend the
17 following: "The profile of the St. Lawrence Ship Channel
18 between Montreal and Quebec. The ship channel as deepened
19 to 27-1/2 feet at ordinary low water, as deepened to
20 30 feet at the extreme low water of 1897, completed
21 project deepening to 35 feet at extreme low water of
22 1897, and completed project deepening to 35 feet at
23 1934 datum."

24 What is the difference between the 1897 extreme
25 low water and the 35 foot 1934 datum?

26 A. We discussed that this morning. In 1934,
27 water levels fell below the long established 1897 datum
28 by a considerable margin, by 2 feet --- a little more
29 than 2 feet --- in the upper harbour in Montreal and
30 2 feet all along the course of the harbour from Point aux



1 Trembles. From there down the difference between the
2 two datum lines diminished until we have about 6 inches
3 of a difference in Sorel and from Sorel downstream the
4 difference between the two datum lines increases again,
5 averaging about a foot and three-quarters, as far as
6 Three Rivers, through Lake St. Pierre and Three Rivers,
7 and diminishing until the two datum lines meet just
8 below Cap de la Roche curve near Cap Charles. The reason
9 the difference is so small in Sorel, 6 inches as
10 compared with 2 feet nearly everywhere else, is the
11 presence of the weirs that are placed, the loose stone
12 dams that are placed in the subsidiary channels in the
13 Sorel Islands. That gives Sorel a little more water,
14 almost a foot more water than it would have if the dams
15 were not there. Now, the dredging is done to this new
16 datum but this differential is kept as a reserve depth
17 because there are boulders and other things that fall
18 in, due to ice action, and as long as they do not reach
19 the level of 1897 datum, there is no danger to navigation,
20 presuming we use 1897 data, which is a legal datum line.

21 Q. Now, your water level gauges --- for
22 example, the gauge at Nouvelle, it is based on the 1897
23 datum, isn't it?

24 A. Yes. Down there there was no differen-
25 tial, to speak of, between the two datum lines. It was
26 a fact only in the non-tidal areas, part of the tidal
27 areas, Cap de la Roche; but then there on the tidal
28 effect diminished. So you do not have this big
29 differential in that area at Nouvelle.

30 Q. But, my question was --- and I would



1 like to have your precise answer to this --- the water
2 level gauge at Nouvelle is based on the 1897 datum?

3 A. Yes.

4 Q. What about the Quebec gauge?

5 A. That is based on the lowest normal tides
6 from Quebec down. That is the end of what we call the
7 datum --- 1897 datum and the beginning of the datum which
8 is based on the lowest normal tides, which is the same
9 in Quebec. But from there on downstream to Father Point
10 and various other places, we use the lowest normal tidal
11 gauge.

ag/md

12 Q. Now, since you have mentioned boulders,
13 is it your experience that quite a number of boulders
14 are getting into the dredged channels, being carried by
15 ice in the spring as ice is drifting on the river in
16 shoals, partly melting on the way down?

17 A. It is usually where there is a certain
18 amount of jamming, and there are boulders on top of the
19 bank and the pressure in the ice movement at the bottom
20 quite easily moves these boulders into the channel.
21 They are not actually carried, but forced by the move-
22 ment of the ice, which is packed down to the bottom of
23 the river, and the pressure of the movement there forces
24 these boulders over the banks and they roll into the
25 channel.

26 Q. Do you mean to say that you have not
27 experienced boulders carrying away because they were
28 carried in shoal ice, and as the ice floats and drifts
29 away in the spring it carries some of them into the
30 channel?



1 A. That can be done.

2 Q. It can be done?

3 A. That happens. Oh, yes.

4 Q. Is there any sweeping down in some of the
5 channels after the freshet in the spring?

6 A. Yes, we make a general sweeping, not a
7 complete coverage because there is not enough time for
8 it, but a general sweeping in the early spring, to cover
9 as much area as possible in a short time, in order to
10 detect whether or not there are any big obstructions in
11 the river. We only run five lines the full width of the
12 channel. The centre one, each side, and one near each
13 bank line.

14 Q. How soon after the freshet season is that
15 done?

16 A. It is done as soon as the ice has gone,
17 which is usually soon after the freshet season, or very
18 close to that time.

19 Q. Mention was made in the course of your
20 testimony of the draught of vessels.

21 Do you have, sir, any opinion as to the minimum
22 clearance that should be maintained under a vessel's
23 keel for safe navigation in your dredged channels between
24 Quebec and Montreal?

25 A. Well, I don't think we have any official
26 opinion. My own would be that a safety factor of 2 feet
27 is not too much.

28 Q. Is it not also a fact, sir, that with
29 such a minimum clearance under the keel of any ship,
30 that that increase and with current astern on either



1 quarter, that the ship would lose quite a lot of her
2 steering way, and would be more difficult to handle?

3 A. Well, that is a navigation question, and
4 I am not qualified to speak with authority on manoeuvring
5 and handling of ships, but you would have difficulty,
6 I would think, being close to the bottom, and there may
7 be a certain amount of heel, which would decrease your
8 distance between the bottom of the ship, and various
9 other factors, which are difficult for a non-navigator
10 to answer.

11 Q. You mentioned also this morning your
12 programme to widen the channel, and you stated that you
13 expect to conclude this widening programme within the
14 next five years.

15 Taking into consideration, sir, the trend to
16 larger vessels and deeper draught, do you think that your
17 programme will keep up with the size of the ship and the
18 increased draught?

19 A. Well, in the light of past experience
20 I would say no. It is difficult to keep up with the
21 trend.

22 Q. Is it not also a fact, sir, that even
23 though you have carried out tremendous improvements in
24 the channel between Quebec and Montreal, that these
25 improvements have been more offset by the size, draught,
26 and speed of the larger cargo vessels that we have
27 nowadays?

28 A. That is very true, yes. We might have
29 to consider the percentage of ships that are of that size.
30 Economics comes into it, and all that. I think you are



1 very right in stating that the size of ships has gone
2 beyond the facilities, but the average ship has no
3 trouble.

4 Q. Would we not be also safe to conclude
5 from what you have just said that even though you have
6 had these many improvements to the ship channel between
7 Quebec and Montreal, that as much skill is required now
8 to handle these larger vessels as was required to handle
9 much smaller vessels some ten or fifteen years ago?

10 A. Yes, I think there is no doubt that a
11 great deal of skill is required. As I say, I am not a
12 navigator, and I just can't speak from experience in
13 that regard.

14 Q. You have had quite a bit of experience,
15 and you know this channel pretty well, and you have been
16 on many of your ships yourself, and you know what is
17 taking place, I am quite sure.

18 Is it not a fact, sir, that in some of the
19 curves in the St. Lawrence River and in particular in
20 the curve at Ile aux Vaches, that these larger vessels
21 are becoming quite a problem, getting difficult to
22 handle, and you have to keep quite a high speed on in
23 order to be able to negotiate the curve?

24 A. Yes, you have a very restricted area,
25 with high banks. The islands are close to the channel,
26 and in a condition like that, manoeuvrability like that
27 is more of a problem than within the open reaches,
28 certainly.

29 Q. I don't know if you have given this in
30 your evidence, Mr. Land, but what is the maximum current



1 that you encounter in the channel between Quebec and
2 Montreal, taking into account the combined action of the
3 river flow and the tide?

4 A. Well, the river flow alone, the maximum
5 velocity in Montreal Harbour is about 5 knots, but it
6 could go up to very nearly 6 knots at high flows, and we
7 have very high flows in the spring, and downstream the
8 combined effect of a current and the tide at Cap a la
9 Roche is in the nature of 5-1/2 knots. At Richelieu
10 Rapids it was at one time nearly 6 knots, I believe.
11 Under certain conditions, combined conditions of a high
12 tide, extreme low, at least extreme ebb tide, combined
13 with the flow on the river, but we have widened that
14 area. Theoretically at least we should reduce the
15 current somewhat there by widening it.

16 Q. Now, this morning you made reference to
17 shifting sand bars, and you made this reference when you
18 were giving some information about the dredging to be
19 done at Cap Gribane.

20 Do you encounter, do you get this situation
21 also in the sector of the river between Montreal and
22 Quebec?

23 A. Not to the same extent, no. We have
24 certain areas that are subject to filling, but the rate
25 of filling varies very much with the amount of water
26 coming in from the tributary streams.

27 Q. But when you mentioned that siltration
28 was not uniform in the river, did you refer also to the
29 sector between Quebec and Montreal, or only to the sector
30 below Quebec?



1 A. No, particularly to the section between
2 Montreal and Quebec. It is not uniform there. There is
3 more uniformity below Quebec than above.

4 Q. This morning, as you were giving your
5 testimony, did you not a year ago or so carry out an
6 experiment on Lake St. Peter, in driving clusters of piles
7 on the north side of the channel in order to keep the
8 ice in place, so to speak, in the spring, so that as soon
9 as the channel is open that ice won't be driven into the
10 channel by the weather and the current?

11 A. Well, we tried an experiment there, but
12 the holding ground in Lake St. Peter is so soft that the
13 pressure just bent the piles over, and they were not
14 effective at all. Anything to hold the ice would have
15 to be devised on a different basis altogether, with a
16 very heavy base foundation.

17 Q. Has your experience been sufficient to
18 enable you to work now on plans to have something to
19 replace these clusters, and to be sufficient to hold the
20 ice?

21 A. Yes, we are studying this matter right
22 now, in conjunction with our hydraulic study.

23 Q. This afternoon you mentioned that your
24 aim was to cut, or to flatten as much as you could the
25 curves, the sharp curves in the river. This brings a
26 question to my mind.

27 Could this not have been done when the anchor-
28 age at Batiscan was dredged, or was there a physical
29 obstacle to it?

30 A. You would refer then to the widening of



1 Batiscan curve on the south?

2 Q. Yes, instead of having the anchorage on
3 the north side of the channel, wouldn't it have been
4 possible to have it on the south side, and at the same
5 time flatten the curve?

6 A. Well, there was one difficulty there,
7 putting the anchorage on the north side involved mainly
8 the removal of sand, and on the south side it was rock
9 approaches very close to the grade, and if we widened
10 the curve to the extent where it could be used as an
11 anchorage, we would be in shale rock in certain areas,
12 which is quite expensive to excavate.

13 Q. Would it have been possible also to have
14 this anchorage so dredged that a vessel using it would
15 be within the range lights? As it is, you have to get
16 out of the range lights.

17 A. Well, that would interfere with naviga-
18 tion, with ships, going by, they would have to leave the
19 range lights clear for through navigation.

20 Q. What I mean is, by having dredged this
21 anchorage farther up, or farther down, you could have
22 made better use of the range lights. Was there any
23 physical obstacle to that?

24 A. No, excepting what I pointed out, that
25 the area was cheaper dredging, being sand it was easier
26 to move.

27 Q. This programme of widening the channel
28 in Cap Sante Traverse, is it in your programme to widen
29 the channel on both sides? It was widened some years
30 ago on the north side. Do you plan to widen it on the



1 south also?

2 A. No. We widened it on the north, so it
3 is now 800 feet wide altogether there, so there is no
4 plan in sight of widening it further than it is right now.

5 Q. So, since your work has been completed
6 there now, the leading lights could be changed permanent-
7 ly, so that they would make the centre of the channel?

8 A. Right.

9 Q. Would there be any adverse results to the
10 removal of the shoal in the Harbour of Three Rivers
11 between the south and the north channel? Would it affect
12 the level of the water?

13 A. There might be an effect there. We are
14 extending our hydraulic studies this year to take in that
15 area, and we are not only making calculations, but we
16 hope to be able to make a model test of that section.
17 We think there would be some effect, probably lowering
18 of the levels.

19 Q. But you are still carrying on studies?

20 A. Oh, yes, definitely.

21 Q. What is the maximum current in the
22 Chicoutimi channel from St. Jean south?

23 A. It is not much more than 2 knots, 2.5.
24 I have taken measurements there personally at full falling
25 tide, and I didn't find much more than 2-1/2 knots in
26 there.

27 Q. But you did get a cross current?

28 A. Oh, yes, definitely.

29 Q. Is it not a fact also that there are
30 difficulties in holding the buoys in place?



1 A. Yes, there is some difficulty there.

2 Q. Are there any parts of the river immedia-
3 tely below Quebec, between Quebec and the Saguenay River,
4 where ships with a big draught would have to anchor and
5 wait for the tide in order to come up to Quebec?

6 A. Well, in the Cap Gribane area we referred
7 to, at the present time there is a limit depth of 25
8 feet at extremely low tide, and in the remainder of the
9 channel it is in the neighbourhood of 30 feet. So that
10 if a ship weren't drawing more than that it would have
11 to anchor, or time its arrival at a particular place,
12 by slowing down, so as to arrive there when there is a
13 considerable tide.

14 Q. Would you know where ships would normally
15 anchor?

16 A. No, I couldn't answer that. No.

17 Q. Would it not be below Elbow Island, would
18 you know?

19 A. Well, they could probably anchor there,
20 yes.

21 Q. In exhibit 487 I noted that in the
22 channel the depth is indicated as being 24 feet,
23 and I understood you to say that it is much less than that
24 since the channel has been abandoned?

25 A. Yes, it is much less than that now. I
26 don't think there would be more than 18 feet. That is an
27 estimate on my part.

28 Q. I also notice, for example, on the same
29 exhibit, you still have the light ship at White Island,
30 and at Red Island.



1 Am I to understand that these exhibits aren't
2 up-to-date as far as aids to navigation are concerned?

3 A. The light ships are gone.

4 Q. But these exhibits ---- I want that in the
5 record --- aren't up-to-date as far as aids to navigation
6 are concerned?

7 A. The aids to navigation man could answer
8 that officially, but I will say that they are not up-to-
9 date, because they are still shown.

10 COMMISSIONER SMITH: If your lordship pleases
11 I have one question I would like to ask the witness.

12 Mr. Land, in your testimony this morning and
13 yesterday you mentioned the fact that in 1897 was the
14 lowest level of water in Montreal Harbour for a long
15 number of years, and they used that as the datum, and I
16 understand that it came up to 1934, when there was still
17 a lower level of water in Montreal Harbour than there was
18 in 1897.

19 I am curious to find out why the 1897 datum
20 wasn't dropped, and the 1934 datum accepted, in order to
21 avoid some confusion.

22 I think you did give some little explanation
23 about this, but certainly I didn't follow it, or under-
24 stand it, and I would like to know what the reason is
25 for not accepting the 1934 datum, and dropping the 1897
26 datum?

27 THE WITNESS: Well, it is a matter of policy,
28 but I could say this, that we found it very difficult to
29 maintain the 1934 depth because of the intrusion of
30 boulders, and stuff moved by the ice, so the Departmental



1 policy has been to do all our dredging to the 1934 datum,
2 and if this has a little extra depth in reserve to take
3 care of filling that occurs and can't be removed in time,
4 I have no doubt that the new datum, or some datum, will
5 be established within a reasonable length of time after
6 the completion of studies that are being made right now.

7 COMMISSIONER SMITH: Thank you very much.

8
9 RE-EXAMINATION BY MR. JACQUES:

10
11 Q. With respect to the depth of water in
12 your channel, is it safe for shipping?

13 A. Well, it is safe for ships, shipping that
14 has a knowledge of what the depth is now. For instance,
15 today's depth in the Harbour of Montreal is 34 feet 3
16 inches, so any ship would have to accommodate itself to
17 that depth.

18 Q. Yes, but you also said this morning that
19 this depth was advertised?

20 A. Yes.

21 Q. With broadcasts?

22 A. Yes, certainly.

23 Q. Somehow?

24 A. Oh, yes.

25 Q. A ship knowing the latest advertised
26 depth could rely on that as being accurate?

27 A. At the moment, yes.

28 Q. As being accurate?

29 A. Oh, yes, definitely. We check our gauges
30 every day. The mathematical operation of these gauges,



1 they are checked twice a day as a matter of fact.

2 Q. Do you recollect any groundings ever
3 taking place because there was less water than advertised?

4 A. Groundings, no, I can't say I can, not
5 due to less water than was advertised.

6 Q. I don't mean a ship going up the channel.
7 A ship going over a place where there is supposed to be
8 35 feet of water and finding there is only 30 feet?

9 A. No, I can't recall any instances of that.

10 Q. It has not happened?

11 A. Not to my own knowledge.

12 Q. To the best of your knowledge are there
13 any cases in the ship channel where currents are danger-
14 ous to ships, or could be dangerous to shipping?

15 A. Well, it depends on the circumstances.
16 If the ship were having steering trouble, or engine
17 trouble ---

18 Q. No. I mean a ship well found and the
19 engine working and the rudder working?

20 A. No, I don't think there should be any
21 difficulty. I mean, the ships that come into Montreal
22 now.

23 THE CHAIRMAN: We will adjourn until tomorrow
24 morning at 10.00 o'clock.

25

26 --- At 4.00 p.m. the hearing was adjourned until
27 10.00 a.m. on Wednesday the 3rd day of July,
28 1963.

29

30

BINDING SECT

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